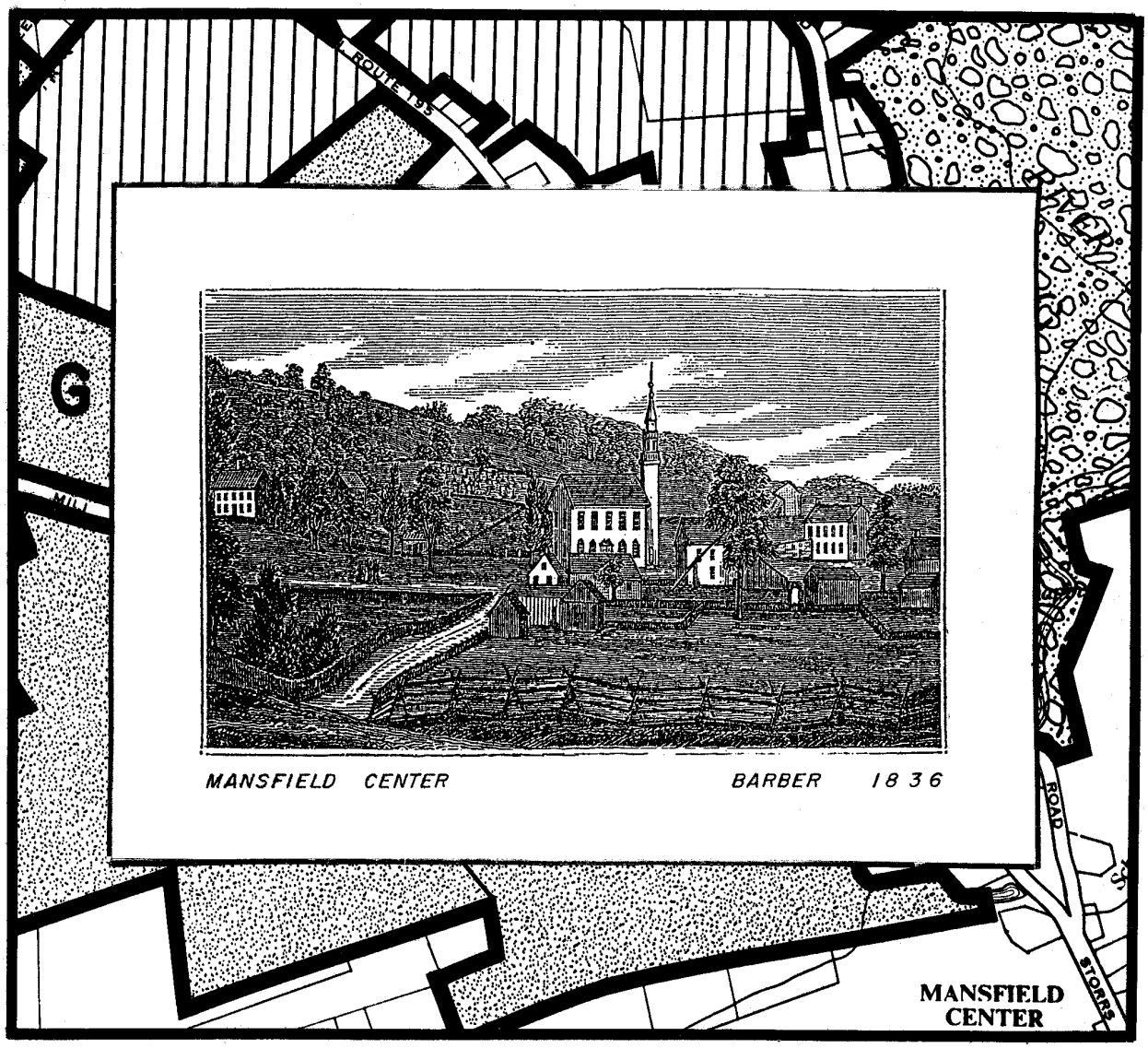
1993

PLAN OF DEVELOPMENT

MANSFIELD
CONNECTICUT



Planning & Zoning Commission

1993

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Mansfield, Connecticut

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MANSFIELD, CONNECTICUT

Effective Date: September 15, 1993

MANSFIELD PLANNING AND ZONING COMMISSION:

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Don Nolan
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ACKNOWLEDGEMENTS

This Plan of Development for the Town of Mansfield has been adopted by the Planning and Zoning Commission as an update of earlier Plans and a replacement for the Town's 1982 Plan of Development. It specifies goals, policies and land use recommendations designed to protect and promote the overall health, welfare and safety of present and future Mansfield residents.

The preparation of this Plan involved countless hours of deliberation and contributions by Planning and Zoning Commissioners and numerous other individuals. Members of the Commission's Plan of Development Committee met frequently over a two-year review period to prepare a series of draft Plans for consideration by the full Planning and Zoning Commission. Committee members were Aline Booth, Audrey Barberet, Kay Holt, Joe Pandolfo, Mary Stanton, Bill Thorne and Linda Sabatelli. It also is important to acknowledge the contributions of Roberta Smith, Mansfield's Town Historian; Kay Holt, the principal author of the History chapter; the citizen participants in Mansfield's 2002 Strategic Planning Study, particularly Sherman Clebnik, an ECSU geologist who helped prepare the text and mapping on aquifer areas in Mansfield; Nicholas Bellantoni, State Archaeologist; and members of Mansfield's Transportation Advisory Committee, Conservation Commission and Open Space Preservation Committee.

The Planning and Zoning Commission sincerely appreciates the efforts of the many staff members who assisted in the preparation of this Plan. Town Planner Gregory Padick is given special recognition and thanks for his assistance in preparing drafts of the text and coordinating the Commission's efforts in obtaining necessary review information and helping to establish realistic goals for the Town. Jane Reinhardt, Planning Office Secretary, is thanked for her assistance in typing, formatting and reproducing the Plan. Kenneth Such, of the Public Works Department, prepared all the final maps and helped coordinate the printing and publication. Lon Hultgren, Director of Public Works, assisted with information related to roads, transportation and public facilities. Grant Meitzler, Assistant Town Engineer, designed the cover and helped with the History chapter. Curt Vincente, Director of Recreation, assisted with the recreational component of the Plan.

Special thanks go to the citizens of Mansfield who provided review and comments at the Public Hearings -- it is their Town and their future.

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List of Plan of Development Maps

All of the maps contained in this Plan of Development have been carefully prepared and provide valuable information about the Town of Mansfield. However, it is important to emphasize that these maps should not be considered or utilized as Zoning Maps, which are adopted pursuant to Section 8-2 of the State Statutes. Furthermore, many property lines may be inaccurate and many classification boundaries, particularly with respect to natural resource features and open space boundaries, are considered generic in nature. Any questions regarding mapping boundaries and any conflicts between the Plan of Development text and classification boundaries shall be resolved by the Planning and Zoning Commission.

Maps contained in folders at the end of this Plan of Development:

I, INTRODUCTION

Planning is a dynamic process of recognizing the past and anticipating and preparing for the future. The adoption and subsequent implementation of a municipal Plan of Development, or Master Plan, is a continuous process of documenting a community's multi-faceted land use characteristics and establishing a consistent and coordinated land use philosophy and regulatory framework for managing the Town's future physical, economic and social environment. The Plan of Development specifies goals, policies and land use recommendations designed to protect and promote the overall health, welfare and safety of existing and future residents, but it is primarily an advisory document and, to a significant degree, must be implemented through the creation or refinement of zoning districts, zoning and subdivision regulations, and Town ordinances. In addition, the Master Plan plays an important role in influencing capital expenditure decisions and the formulation of housing, transportation, sewer and water system priorities.

This Plan of Development revision for Mansfield, Connecticut, is adopted in accordance with the provisions of Section 8-23 of the Connecticut General Statutes, as amended. In formulating this 1993 revision, the Planning and Zoning Commission has carefully reviewed the information and findings contained in its 1982 and 1971 Plans of Develoment and information and recommendations prepared by the Town's "2002 Strategic Planning" subcomittees. This strategic planning effort, which began in 1989 and has involved over 100 citizen volunteers, has provided valuable current information on Mansfield's physical, economic and social characteristics. The Commission also has studied current State and Windham Regional Planning Agency land use plans and has met with various Town agencies and staff members. In addition, this revision takes into account national, regional and State demographic trends, recent environmental data and changes in the Connecticut General Statutes. Very importantly, this Master Plan Update attempts to reflect the needs and desires of Mansfield residents as expressed through numerous Public Hearings and meetings held within the past ten years.

Although the Plan of Development is primarily an advisory document in the State of Connecticut, it has become increasingly important as the legal basis for establishing land use controls and rendering land use decisions. This 1993 Plan of Development provides a framework for land use decisions up to and beyond the year 2002. However, due to its emerging legal significance and the necessity of being responsive to current information and current citizen needs and desires, all of the Plan's components must be continuously monitored and, as necessary, periodically revised. It is with this intent and spirit that Mansfield's Master Plan is being updated.

II, ASSESSMENT OF 1982 PLAN OF DEVELOPMENT

A. General

In undertaking this Master Plan revision, the Planning and Zoning Commission has several purposes:

1. to update, reaffirm or correct the factural information contained or referenced in the 1982 Plan of Development;

2. to examine the planning policies contained in the 1982 Plan for current validity; and

3. to develop new planning policies and recommendations for future land use in Mansfield

Mansfield's 1982 Plan of Development updated the Planning Recommendations component of the Town's 1971 Master Plan and, through direct reference, retained factural information contained in the Basic Studies section of this previous Plan. Many elements of the Town's 1971 Open Space and Recreation Plan components also were retained by reference, rather than reproduction. For the 1993 Plan of Development update, it was decided to incorporate Plan of Development information into one new document. Information which has not significantly changed since 1971, such as topographic mapping, has been reproduced for the 1993 Plan and, where deemed appropriate, other information has been updated or supplemented with new data.

Since the preparation and adoption of the 1982 Plan of Development, many changes have occurred in Mansfield. Between 1980 and 1990, Mansfield's non-institutional population has increased by 1,154 individuals, while the Town's institutional population (University of Connecticut dormitories and group quarters on the Mansfield Training School property) has dropped by 685 persons. During this ten-year period (from January 1, 1980 to January 1, 1990), building permits were issued for 816 new dwelling units (367 single-family; 32 two-family; 417 multi-family). New shopping centers have been created in two locations on Storrs Road and on No. Eagleville Road, and the East Brook Mall was expanded. All of Mansfield's schools have been enlarged and the Town's Senior Center and Library have been expanded. A new municipal day care center has been built, the University of Connecticut has constructed a new sports arena, and a corrections facility has been created on the Mansfield Training School site. Due to Mansfield's geographic location and physical resources, as well as its social and educational attributes, our town will continue to experience land use changes.

Within this environment of change and with the assistance of increased citizen participation in land use issues, Mansfield's Plan of Development has been revised. After careful consideration, the Planning and Zoning Commission has determined that theTown's overall approach to land use regulation and many of the planning goals, objectives and recommendations contained in the 1982 Plan of Development remain applicable and, therefore, have been retained. In addition, the 1993 Master Plan incorporates new information and addresses land use issues and concerns raised in the last decade through a refinement and elabo-

ration of previous goals and objectives and an increased emphasis on environmental protection and historic and agricultural preservation. This Plan of Development incorporates current natural resource information, addresses recent revisions to the State Statutes and land use issues related to the University of Connecticut and the reuse of buildings and land formerly utilized by the Mansfield Training School. The 1993 Master Plan recommends changes to the Town's zoning districts and land use regulations. It presents a framework for managing the impacts of future development, while protecting our Town's semi-rural quality of life. Acknowledging that there are significant legal limitations regarding the extent of local land use regulation and that the fulfillment of many goals and objectives requires the cooperation of property owners and developers, this Plan is designed to help preserve Mansfield's valuable assets, while encouraging affordable housing, environmentally compatible commercial and industrial development, and the infrastructure necessary to safely support a mix of land uses.

B. Population Analysis

Mansfield's 1982 Plan of Development utilized population data and projections prepared by the Windham Regional Planning Agency prior to obtaining 1980 Census information. These pre-Census projections estimated a 1990 population for Mansfield of 24,400 individuals, with 11,200 persons in group quarters and 13,200 persons in households. These estimates did not anticipate an actual decline in Mansfield's group quarters population between 1980 and 1990. Addi tionally, the projected increase in household population was overestimated. The decline in group quarters primarily resulted from the phasing out of Mansfield Training School as a residential facility for the State Department of Mental Retardation.

Based on the 1990 Census data, Mansfield's population increased to 21,103 persons, a 2.3 percent increase (469 persons) over the 1980 census total of 20,634 persons. Of importance, Mansfield's group quarters population de creased by 685 units between 1980 and 1990 and the Town's non-group quarters population increased by 1,154 persons, or a 10.5 percent increase over the 1980 non-group quarters population.

It is important to note that Mansfield's group quarters population fluctuates between the spring and fall of each year. This fluctiation is primarily due to drop-outs, transfers and mid-term graduations and policy changes at the University of Connecticut. For example, in the fall of 1990, UConn had 765 more dormitory students than were present at the time of the April 1, 1990 Census count. In total, due to UConn's increase in on-campus resident students and an increase in the resident population at the recently established State Corrections Department facility on Route 44, Mansfield's fall, 1990 group quarters population increased to an estimated 9,800 persons and the Town's total population in the fall of 1990 was approximately 22,000 persons (900 more than the Town's April 1, 1990 Census total). Mansfield's fall, 1990 group quarters populations consisted of 9,350 dormitory students at the University of Connecticut, 250 residents at the State's corrections facility on Route 44 and 200 residents at the State's mental retardation facility at Mansfield Training School. However, as of November 1, 1991, UConn's dormitory population dropped to 8,631, the Route 44 corrections facility increased to a resident population of over 300, and the Mansfield Training School resident population had dropped to approximately 150. Mansfield's fall, 1991 group quarters population dropped to 9,081, an overall decrease of 719 persons from the previous fall.

Many variables affect population growth in a community. National, State and regional economics are primary factors. Within local economies, "quality of life" characteristics (such as educational and social services, public safety, the quality of the physical environment, etc.) and "affordability" are considered important, and, for these reasons, it is anticipated that there will be a continued pattern of migration to rural and suburban towns in eastern Connecticut. Increased employment opportunities, such as the development of a research and development park in Mansfield, also will contribute to this migration pattern. Based on Mansfield's geographic location and "quality of life" attributes, continued population growth is expected. The rate of growth is difficult to predict, but residents in group quarters are expected to remain at or near 1990 levels and a continuation of a ten percent increase in

the Town's non-group quarters population is considered likely. This Plan of Development provides a framework for guiding this anticipated growth in a manner that is compatible with the Town's land use goals and objectives. To be responsive to unexpected trends, the land use policies established in this Plan of Development Update attempt to retain ample flexibility to respond to population increases exceeding those forecast. This "Master Plan" is designed to address development impacts up to and beyond the year 2002.

In an April, 1991 publication, the Connecticut Census Data Center projects Mansfield's population will increase to 22,280 by April 1, 2000, an increase of 1,177 persons over the 1990 Census Population figure. This is an overall increase of 5.5%. However, since the Connecticut Census Data Center model anticipated no change in Mansfield's group quarters population, household population would increase by 9.6%. This anticipated increase in non-group quarters population approximates the growth experienced in the 1980's. The State's projections indicate an expected population of 23,080 in the year 2010. Although the State's model does not attempt to predict the impact of future development or of transportation or employment resource alterations, it is considered the best available source for basing land use policies in Mansfield. Revised population projection data from the State are expected in 1993 or 1994.

Population projections can provide valuable insights into anticipated population patterns for various age groups in Mansfield. Significant changes in Mansfield's population distribution will affect future housing, transportation and service needs and may influence the financial resources available to meet these needs. Based on June, 1989 State projections for the twenty-year period from 1990 to 2010, there will be little overall change in the Town's under-25 population, a decline in the Town's 25 to 49 population, and increases in the Town's 50-year and older population. The State has not yet published revised population projections by age that are based on 1990 Census data.

All population projections are subject to revision and must be continuously monitored for current acceptability. Local and regional construction activities must be followed closely and, as development trends emerge, population forecasts must be updated and planning objectives reviewed. It is important to emphasize that policy decisions of Federal, State and local governments can have a major influence on overall development patterns and population trends. Changes in Federal and State laws, funding programs and land use policies and the manner with which municipalities exercise regulatory authority can affect population growth.

Table 1 includes an assessment of population data for Mansfield. This information, most of which was obtained from a June, 1992 report prepared by the Windham Regional Planning Agency, has been considered in association with the various goals and recommendations contained within this Plan of Development.

Table I
Population Data for Mansfield

(compiled from a June, 1992 Windham Regional Planning Agency report and 1990 Census Data - more specific information is available through the WRPA)

A. Population Projections

Census 1980	Census 1990	Projected 1995	Projected 2000	Projected 2005	Projected 2010
20,634	21,103	21,950	22,280	22,750	23,080

B. Population: Age and Sex Distribution, 1990

	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+	Total
Total Population:	700	1,322	10,528	2,487	2,116	1,299	1,122	1,529	21,103
Female Population:	348	653	5,498	1,135	1,044	665	575	872	10,790
Male Population:	352	669	5,030	1,352	1,072	634	547	657	10,313

C. Households, Families, and Group Quarters

Total Persons	Households (includes one person living alone)	Persons per Household	Families	Persons per family	Persons in group quarters
21,103	4,931	2.47	3,055	2.90	8,920

D. Land Area and Population Density

1990 Population	Land Area (sq. mi.)	Population per sq. mi.
21,103	44.5	474.2

E. Population by Race and Hispanic Origin

	White		Black		Amer. Ind. Eskimo/Aleut		Asian or Pacif. Isl.		Other Race		Hispanic Origin	
Total	#	%	#	%	#	%	#	%	#	%	#	%
21,103	18,912	89.6	690	3.3	31	0.1	1,281	6.1	189	0.9	573	2.7

F. Educational Attainment

Persons 25 & over	Less than 9th grade	Some High school, no diploma	High School graduate	Some College, no degree	Bachelor's degree	Associate's degree
8,593	595	544	1,475	1,049	1,560	500

Grad or Profess. Degree	% High School or Higher	% Bachelor's or Higher
2,870	86.7	51.6

G. Occupations of Employed Residents

Employed (16 years and older)	Exec., Admin. & M'grial.	Profess. Specialty	Technic. & Rel. Support	Sales	Admin. Support, incl. Clerical	Private Household	Protective Service
10,438	1,018	2,768	533	1,060	1,785	12	156

Service Occups. except Prot. & Household	Farming, Forestry & Fishing Occup.	Precision, Production Craft and Repair	Machine Operators, Assemblers & Inspectors	Transp. & Material Moving	Handlers, Eqpt. Clnrs, Helpers & Laborers
1,761	69	611	224	186	255

H. Industry of Employed Residents

Employed (16 years & older)	Agriculture, Forestry & Fisheries	Mining	Construction	Mfgr. Non-Durable Goods	Mfgr. Durable Goods	Transportation
10,438	95	---	311	270	453	213

Communications & Other Pub. Utilities	Wholesale Trade	Retail Trade	Finance, Ins. & Real Estate	Business & Repair Service	Prsnl. Serv.
68	169	2,051	536	363	136

Entertainmt. & Recr. Service	Health Service	Educ. Service	Other Professional & Res. Svcs.	Public Admin.
208	670	3,864	524	507

I. Classification of Employed Resident Workers

Employed (16 years & older)	Private Wage & Salary Workers	Gov't. Workers: Local Gov't.	State Gov't.	Fed. Gov't.	Self-Employed Workers	Unpaid Family Workers
10,438	5,295	533	4,145	106	351	8

J. Non-agricultural Jobs within the Town of Mansfield, 1987-90 and Resident Labor Force, 1990

Statistics for Month of June				Resident Labor Force
1987	1988	1989	1990	1990 Census
8,820	9,100	9,000	8,870	10,855

K. Annualized Unemployment Rates, 1987-91

1987	1988	1989	1990	1991
1.2	1.5	1.5	2.1	3.4

L. Income in 1990

Median Household Income	% of State Level	Median Family Income	% of State Level	Median Non-fam. Household Income	% of State Level	Per Capita Income	% of State Level
38,591	92.5	50,158	101.9	24,009	100.9	13,502	66.9

M. Poverty Status (based on 1989 incomes)

Persons in Poverty				Families in Poverty					
All Persons		Aged 65 and over		All Families		All		Female Householders with Children under 5	
#	%	#	%	#	%	#	%	#	%
1,340	11.0	43	2.8	143	4.6	39	10.9	20	32.3

C. Building and Development Activity in the 1980's

Based on the 1990 Census and the Town's 1990 revaluation, there are about 5,150 dwelling units in the Town of Mansfield, excluding dormitories on the University of Connecticut campus and group quarters facilities operated on the Mansfield Training School site by the State Departments of Corrections and Mental Retardation. Of these 5,150 dwelling units, about 1,515 units are within condominium or apartment developments, 315 are mobile manufactured home units, and 110 are duplex units. The remainder, or 3,210 units, are single-family units or single-family units that have been converted into multiple-unit dwellings. Mansfield has a significant mix of housing types. Table 2 contains data on housing types and tenure, median residential sales prices and structural and plumbing characteristics in 1990.

Table 2
Housing Data (compiled from a June, 1992 Windham Regional Planning Agency Report and 1990 Census Data

A. Housing types and tenure (from 1990 Census)

Population in Households (excluding dormitories, institutions & other group Quarters)	Total units (including seasonal)	Single-Family units	Multi-Family units (2 or more families)	Mobile Homes	Other Housing types
12,183	5,158	2,998	1,768	312	80

Owner-occupied	Renter-occupied	Homeowner vacancy rate (percent)	Renter vacancy rate (percent)
2,987	1,944	1.6	5.1

B. Median Residential Sales Prices, 1986-90

1986			1987			1988		
Sales	Median Price	State Rank	Sales	Median Price	State Rank	Sales	Median Price	State Rank
110	79,000	149	287	89,900	160	219	120,200	149

1989			1990			5-year Average
Sales	Median Price	State Rank	Sales	Median Price	State Rank	State Rank
179	129,000	132	111	132,000	116	141

C. Structural and Plumbing Characteristics (from 1990 Census)

Total Housing Units	% built after 1980	% built before 1940	% with 1 or fewer bedrooms	% with 4 or more bedrooms	% of condo-miniums	% with private well	% with public sewer
5,158	20.4	14.6	28.7	12.7	6.5	37.4	53.1

The following chart, compiled from Building Permit records, documents that, during the ten-year period from January 1, 1980 to January 1, 1990, Building Permits were issued for 816 additional dwelling units in town. According to Mansfield's Building Official, most, if not all, of these units have been completed and occupied by the fall of 1991. Assuming full occupancy, Mans field's housing stock increased by 18.8 percent since 1980. It is important to note that the number of multi-family units constructed since 1980 (417) exceeded the number of new single-family units (367). New multi-family units have been concentrated in areas adjacent to the University of Connecticut Storrs campus and in areas in southern Mansfield between Route 195 and Mans field City Road. Since 1980, Mansfield's Planning and Zoning Commission approved over 680 multi-family units in town. Not all of these units have been constructed.

Mansfield Housing Units Issued by Building Permit
January 1, 1980 to January 1, 1990

Fiscal Year (7-1 to 6-30)	Single-family Units	Two-family Units	Multi Family Units
2nd half of '79-'80	10	0	0
'80-'81	25	0	14
'81-'82	19	0	8
'82-'83	30	8	20
'83-'84	40	4	10
'84-'85	47	12	0
'85-'86	48	2	35
'86-'87	78	2	168
'87-'88	42	0	119
'88-'89	16	4	8
1st half of '89-'90	12	0	35
Totals	367	32	417

Total number of dwelling unit Permits issued: 816

As documented in the following chart, 395 subdivision lots were approved by the Planning and Zoning Commission during the 1980's. From January 1, 1990 to

January 1, 1992, 38 additional lots have been approved. The lots approved since 1980 have been distributed throughout the Town, with many of the larger subdivisions located west of Route 195 and south of Route 275.

Mansfield Subdivision Lots Approved from January 1, 1980 to January 1, 1990

Year (calendar)	Number of approved lots
1980	35
1981	16
1982	19
1983	41
1984	26
1985	18
1986	36
1987	51
1988	81
1989	72
total	395 lots

Since 1980, new commercial developments have been constructed in southern Mansfield and in areas adjacent to the University of Connecticut Storrs campus. In southern Mansfield, the East Brook Mall was expanded by about 40,000 square feet and a new 75,000 square foot shopping center, Storrs Road Plaza, was constructed in 1990. The first two buildings of Ledgebrook, a planned eleven-building, 65,000 square foot office park on Conantville Road, were occupied in 1991. In areas adjacent to the University campus, Storrs Commons, a 26,000 square foot commercial development on Route 195 was constructed in 1986, and on No. Eagleville Road, a 15,000 square foot commercial building was constructed in 1989. During this ten-year period, a number of smaller commercial developments occurred throughout Town, primarily within designated Business zones.

Since the 1982 Plan of Development was adopted, the Planning and Zoning Commission rezoned 390 acres of State-owned land north of the UConn campus as a Research and Development/Limited Industrial zone and approved permitted use provisions and approval criteria that would allow the development of the Connecticut Technology Park project. A new roadway between Route 44 and the UConn campus and two research/office buildings (42,000 and 32,000 square feet in size) and an 85-room hotel/conference center were approved by the Commission. Due to reorganizational issues that do not involve the Town, the roadway has not been completed and the buildings are not expected to be constructed as approved. However, the State of Connecticut has authorized funding for the completion of the new road and alternative development plans are expected to be submitted for Planning and Zoning Commission approval during the next few years. No significant development activity has taken place within the Town's industrial park areas in southern Mansfield since the adoption of the 1982 Plan of Development.

III, GENERAL POLICY GOALS

In updating the Town's Plan of Development and in establishing land use policies and recommendations, the Planning and Zoning Commission has established the following underlying goals:

1) To conserve and preserve Mansfield's natural, historic and agricultural resources and semi-rural atmosphere;

2) To provide opportunities for orderly and energy-efficient development and a safe and compatible land use balance of housing, business, industry, agriculture, open space and governmental functions;

3) To strengthen and encourage a sense of neighborhood and community throughout Mansfield;

4) To encourage and provide for a mix of housing opportunities for all income levels;

5) To encourage development patterns that enhance public transportation opportunities

IV, History and Preservation of Historic Resources

A. A General History of Mansfield, Connecticut, with emphasis on land formation and use

1. Geologic History and Native American History

Mansfield's present landscape was formed over hundreds of millions of years by two major geologic events. These occurred in addition to the continuous and ongoing process of weathering and erosion. The first event was a colossal but slow-moving collision of continental plates that began possibly as long ago as 500 million years. Like most of Connecticut, Mansfield started its existence as the Iapetos Ocean, an ancient sea bed, which for the next 250 million years was slowly crushed between two colliding continental plates: Proto-North America and Proto-Africa.

The proto-continental plates were crushed together on their way to forming a single supercontinent, Pangaea. This collision formation caused the ancient ocean floor to buckle and fold into a chain of high mountains that still exists, although now greatly eroded, known as the Appalachian Mountain Chain. Thus was formed the bedrock of Eastern Connecticut, known to geologists as the Eastern Uplands of Connecticut.

The supercontinent Pangaea held together a relatively short time in geologic history, about 50 million years, before the continental plates began to break apart along new separations. The direction of continental drift was reversed and Europe and Africa started to move away from the Americas, a process that continues even today. However, the Iapetos Ocean floor has remained forever crushed and lifted into its mountainous configuration, and it is this ancient bedrock that provides the rock foundation for the gently rolling hills found in Mansfield today.

There is, however, a small section of southeastern Mansfield that has a different geologic origin. Called the "Willimantic Basin", it started its existence as one of the ancient Avalonian Islands (600-800 million years old) located in the middle of the Iapetos Ocean before the formation of Pangaea. The islands were crushed and welded to the Eastern Uplands during the collision formation and are known to be of a different geological terrane (sic) than that of the surrounding uplands. The Willimantic Basin is significant because its Avalonian terrane is where the larger rivers and steeper waterfalls were cut and formed, thus creating the natural resources that would later enable Mansfield and Windham, as well as other New England areas of Avalonian origin, to participate in the early part of the Industrial Revolution in America.

The second major geologic event to shape the area was an "ice age" that included a period of several glaciations in the Northern Hemisphere; this began some 2 to 3 million years ago. In the intervening millenia between the breakup of Pangaea and the period of glaciations, the Eastern Uplands and Willimantic Basin were being slowly but continuously eroded down to a surface shaped much as we see it today. The glaciers speeded up the process of erosion by grinding down and rounding off the mountainous bedrock with the movement of

their great weight. They removed deep clay soils and weathered rock at the same time they deposited and compacted unsorted till soils over upland areas and filled the valleys and other depressions with water-sorted sediments released from their meltwater streams. The most recent glacial period, the Wisconsinan, started about 85,000 years ago. It covered Connecticut with ice about a mile thick during its peak, and then around 18,000 years ago, the earth began to warm again and the Wisconsin Glacier stopped moving and started to recede. In its wake an incredible assortment of glacial debris remained, known collectively as "drift". The newly-revealed landscape was barren and treeless, like an Arctic tundra, but its basic contours and features would have been recognizable to Mansfield residents today. Some of the more notable glacial features include those:

Formed under the moving continental ice sheet:

Drumlin (Horse Barn Hill) - A smooth, rounded hill with its long axis north to south, in the direction of glacial movement, sloping gently on the upstream end and more steeply on the downstream end. Many drumlins are found in Mansfield.

Cliffs and ledges (Fifty Foot, Mt. Hope Rock, Cooney Rock Hill, Wolf Rock Cliffs) - Distinctive features related to or part of the drumlin-shaped hills. These areas of exposed rock usually face southward and were formed as the moving ice lifted, rolled and removed large amounts of fractured and faulted rock with the force of its movement. The easiest removal occurred on the south rock faces with the southerly movement of the glacier, but it also occurred, as at Mount Hope Rock and in ledges along the east side of Gurleyville, where the rock fractures were open and not so strongly bound in place.

Formed during the period of melting:

Glacial Erratic (Wolf Rock) - A boulder that was carried by the glacier from points north as the ice moved south and was deposited randomly as the ice melted. Erratics like Wolf Rock, on a high point, are particularly noticeable; however, there are many erratics found throughout Mansfield.

Esker (above and below Gurleyville along the Fenton River) - A long hill of water-sorted sediments found along a course of water-flow in or under the melting ice mass. Eskers are composed of sand, gravel and boulders just as found in a moving river, which remained in place as the ice disappeared.

Kames (just north of Route 195, east of Baxter Road) - Holes in the ice that filled with sand and gravel as the ice melted. They were left as cone-shaped hills when the ice was gone.

Stratified drift aquifers (Mansfield has 3 large aquifer systems: The Willimantic River aquifer; the Pleasant Valley aquifer; and the Mansfield Center aquifer formed along the valleys of the Fenton, Mount Hope and Natchaug rivers) - A stratified drift aquifer is a deep valley filled with water-saturated gravels that were sorted by the

action of glacial meltwater streams. Aquifers can serve as renewable water sources to large populations of people. There are also a number of smaller but similar formations that are found at higher elevations, where sediments were deposited over shorter periods of time; but these may not be big enough or have adequately-sized recharge areas to serve as water supplies for large populations.

Kettles (Echo Lake, Eaton Bog, Turnip Meadow) - Formations produced as separated ice masses stood alone and were surrounded by sand and gravel deposited by water flowing around the ice. Later, the ice melted and a depression was left in its stead, frequently filled with water as a swamp, pond or lake. Mansfield has a great number of these formations, mainly in Mansfield Center, east of Route 195.

Turnip Meadow - This kettle is a 320-acre (half square mile) low-lying meadow area between Bassetts Bridge Road and Route 89, reaching almost to Atwoodville. The name appeared first in print in 1834, but probably was used earlier. It is now located in the floodpool of the Mansfield Hollow Flood Control Dam. This large marshy meadow area was formed in the space left by a large, similarly-sized mass of ice, as sand and gravel deposits were formed around it. When the large ice mass finally did melt, the low-lying meadow remained.

Formed by wind:

Aeolian deposits (East Brook Mall parking lot) - Uniform deposits of silt blown into place at valley edges during the years of scarce vegetation during and after the glacial recession. This material does not have the layering that indicates settlement in bodies of water. A large area of this material was excavated at the north end of East Brook Mall's parking lot during construction and can still be seen along some of the edges of the parking lot.

In general, Mansfield's present wetlands were formed as the Wisconsin Glacier halted, and ponds, lakes and meltwater streams reworked sediments that it carried. The present system of wetlands and watercourses represents a delicate and continued balance between rainfall, infiltration of that rain into the ground water system, and ground water drainage to discharging streams.

It was about twelve thousand years ago that this last glacier finally disappeared from Connecticut. Lichen sprouted on the thin tundra-like soil, which in turn was supplanted by various successive species of flora that changed in response to the warming climate. These plants were eventually succeeded by the mixed coniferous/deciduous forests found here today. This transition from a sparsely vegetated land surface to denser Eastern Upland forest occurred about 6,000 to 8,500 years ago.

The first animals to migrate to Connecticut after the last glacier were large mammals, or "megafauna": mastodon, giant beaver and caribou. Their presence is indicated by the rare fossilized remains found in various locations throughout the state. Gradually, those early species were succeeded by others, many of which remain in the animal populations present in the area today.

The first Paleo-Indians came to Connecticut approximately 10,000 years ago in search of the megafauna and early food plants. Their life and culture, in part, changed over the years in response to the warming climate and the succession of plant and animal species. These first populations were probably nomadic hunter/gatherers, migrating seasonally with animal populations between food plant locations. This early period was succeeded by various "settler" stages and followed only recently, a little over a thousand years ago, by the "farmer" stage, when the Indians began to plant corn and establish permanent settlements. The planting was in addition to the hunting and gathering methods that still yielded most of their food.

The early Native Americans of New England kept no written records; however, the first European explorers, traders and fishermen, starting with the arrival of Verrazano in 1524, have made descriptions of Indian life in southern New England. In Mansfield, there is no written documentation of any permanent Native American settlements. There are, however, a great number of prehistoric sites and artifacts found here that would indicate the town had been used intensively for a long time as a place to hunt, fish and gather wild foods. It is possible there may have been a small village situated in the area of Mansfield Center, most likely near Echo Lake or at the confluence of the Fenton and Mount Hope rivers. According to tradition, a favorite place for water was Red Spring, located on the southwest border of Turnip Meadow. It was known for its high iron content and supposed healing powers. The Mohegan Indians from the Norwich area would have been the most recent Native Americans to use Mansfield for their hunting, fishing and gathering of wild foods.

2. The Seventeenth Century and English Settlement

Closely following the first European explorers to New England were Europeans fishing the Grand Banks off Newfoundland. This led to trading with the Native Americans of New England, which in turn led to European settlement here. The first successful settlers to arrive were the English Pilgrims who landed at Plymouth, Massachusetts in 1620. After that date, the English came to dominate the European trading territories of New England by virtue of their large numbers and their many settlements.

However, it wasn't until the end of the 17th century, almost exactly 300 years ago, that the first permanent English settlers established themselves in northeastern Connecticut. Two great clashes with the Native Americans preceded their arrival here. Many causes sparked these wars, but the central issue was competition for the same resource: land. Each side had differing views on land use and ownership. The English believed in private land use and ownership, while the Indians generally held that land, regardless of ownership, could be used in common by all members of the tribe. They believed land was held in stewardship and that one did not give up his right to hunt and fish upon it, even if sold to someone else for settling and planting. This conflict in land use led eventually to wars:

- The Pequot War of 1636-1637, in which the English attempted to annihilate the Pequots and almost succeeded;

- King Philip's War, 1675-1676, in which a last concerted effort by the Indians failed to drive the colonists out of the Indians' New England

territories.

The Native Americans lost both wars, although it should be noted that in Connecticut the Sachem Uncas and his tribe of Mohegans broke with the other tribes to side with the English in both wars. The Indian defeat of 1676, however, marked the end of stewardship as a local land use concept and practice.

Neither war was fought on Mansfield soil, but the Indian defeat did have a profound effect here because it opened the territory to English occupation and settlement, according to historian Ellen Larned. In 1675, the same year the Mohegans agreed to fight with the English in King Philip's War, Joshua, the third son of Uncas, signed a will bequeathing a portion of Mohegan land to 16 Englishmen from the Norwich area. A year later, Joshua died from wounds received during the war and, although he predeceased his father, the General Court of Connecticut approved his will and the land dedication in 1678. This land, later known as Joshua's Tract, included the present towns of Windham, Mansfield, Hampton, Scotland and Chaplin. It was at this point that the land use patterns of present-day Mansfield became those of the English.

In 1682, the 16 English legatees drew up an agreement stating that the land for a new town would be divided equally into 48 allotments, or shares, of 1,000 acres each. Three years later, in 1685, the legatees agreed to create three villages within the boundary of the new town and to survey house lots for each. These villages were:

1. Hither Place (present Windham Center) - 15 house lots;
2. Ponde Place or Naubesatuck (present Mansfield Center) - 21 lots;
3. Valley of the Willimantic (near present Willimantic) - 12 lots.

At the same time, a "highway" was laid out through each village. A highway also connected Hither Place to Ponde Place, with a ferry for transportation over the Natchaug River. In Ponde Place, 19 of the 21 house lots were laid out along the easterly side of the highway. This road, known as "Town Street" in the 19th century, originally was 8 rods wide (132 feet) and exists today as Route 195. Many, if not most, of the original lot lines can still be found in Mansfield Center. (For more information on Mansfield Center, see the "Historic Villages" section of this Plan of Development and the centerfold map of the Mansfield Town Report, 1965-66.)

The 16 legatees divided the 48 allotments by lottery in 1686 but did not settle on their land in the early years. The reason was that Sir Edmund Andros had dissolved the colonial government by order of King James II, and Andros refused to recognize Indian land deeds. It was at this time that Connecticut's colonial Charter was hidden in an oak tree for "safe keeping". The legatees delayed in seeking confirmation of their titles until the spring of 1689, which saw the deposition of James II and the subsequent removal of Andros and return of the General Court of Connecticut.

In 1692, after petitioning the General Court, Joshua's Tract was incorporated as the Town of Windham, and the first settlers, Jonathan Hough, Samuel Hide and John Royce, arrived in Ponde Place. Shortly thereafter, a minister was "called and settled" (in Windham Center) and cemeteries were surveyed (Mansfield Center's was laid out in 1693 in its present location on the east side of Route

195). Town pounds were erected (first in Windham Center, later in Mansfield Center), and in 1695 Robert Fenton built a wooden bridge across the Natchaug River to replace the ferry, presumably below the falls at Mansfield Hollow. An early road across the Natchaug River can be seen when the water levels in the Willimantic Reservoir are low.

3. The Eighteenth Century, Mansfield's First Century

Travel between Hither Place and Ponde Place was difficult, even with the new bridge over the "deep and dangerous" Natchaug, and this natural barrier was the cause of an ongoing dispute over the location of a central meetinghouse, or church. In 1702, the townspeople of Windham petitioned the General Court to divide the town into two ecclesiastical societies and to authorize the residents of Ponde Place to form their own township and build their own meetinghouse. A year later (1703) this petition was granted and the Town of Mansfield was separated from Windham and incorporated as a town with the condition that "an able, orthodox minister of the Gospel be called and settled." The Reverend Eleazer Williams answered the call in 1710 and the First Church of Mansfield was founded in the same year. The Williams house, at 572 Storrs Road (started in 1710), and its neighboring 18th-century houses and foundations form the nucleus of the oldest historic village in Mansfield.

During the first part of the 18th century, the chief concerns of the townspeople were "self-sufficient" farming and survival and, later on, settlement of other sections of town. The land was cleared of trees and rocks, crops were planted, stone walls were started, and wooden houses, barns and fences were erected. Sawmills and gristmills sprang up along the streams that gave them waterpower. In Gurleyville, for instance, a sawmill was built in 1723 and a gristmill in 1750. (The present stone gristmill was built there in 1835, replacing the 18th century mill.) Other early 18th century industries known to have existed were a pot-ashery and a tannery in Mansfield Center. Later in the century came a small shoe factory and a clockmaker/silversmith in Mansfield Center, a shop for making augers somewhere in town, and an iron works and fulling mill on Cedar Swamp Brook in the western part of town, near Ravine Road. In 1785, Benjamin Hanks built a bell and cannon foundry on Hanks Hill, where he *cast* the first brass cannon in America.

All the early mills were small wooden structures, and they often formed the nucleus for new population centers and roads. Today there are no existing examples of 18th century mill villages in Mansfield save one, the small cluster of houses and foundations including one from an important sawmill east of Four Cornerson Old Turnpike Rd. near the Fenton River. All other existing mill villages in town date from the early to mid-19th century, although some, like Gurleyville, Mansfield Hollow and Mt. Hope, have a mixture of 18th and 19th-century houses. Unfortunately, all the 18th-century mills have been obliterated.

A major force in the life of the town was the Congregational Church, which had evolved from the Puritan Church and dominated all political, social and religious activity for the entire 18th century. The First Church in Mansfield Center (1710) was the only established church until 1737, when the Town was divided into two parishes and a second church was incorporated in the north parish, known today as the Storrs Congregational Church. Both church

organizations exist today, but their original meetinghouses are gone. For a brief period around 1745, religious dissidents under the influence of the "Great Awakening" founded the Separatist Church at the corner of South Eagleville and Separatist roads. Before the end of the century, however, the "Great Awakening" had died down and new forms of Protestantism were being founded. In Mansfield, for instance, a Methodist church was built on Wormwood Hill in 1794 and a Baptist church on Spring Hill in 1809. The latter's organization still exists in a newer building constructed in 1876. Eastern Mansfield saw the founding of a third Congregational Church parish, which in 1822 was split off to form the Town of Chaplin. The domination of the church as a political force ended in 1818 with the adoption and ratification of a new State Constitution, thus formally separating church and state for all Connecticut residents.

Education in the Mansfield of the 18th century was not the main "industry" that it is today. Farming was the main source of livelihood and, therefore, school was held when farm chores were least pressing. Local tradition has it that the first itinerant teacher was hired in 1706. One notable resident was Joshua More, who in 1754 established an Indian school with Eleazer Wheelock in what is now Columbia, Connecticut. The school later moved to Hanover, New Hampshire, and became Dartmouth College. More's house, built between 1714 and 1718, still stands on Route 32, opposite the junction at Stearns Road.

Throughout the 18th century and well into the 20th, school buildings sprang up, one per district, offering classes for all grades in one or two rooms. The number of schools and the changes in district boundaries were frequent topics at Town Meetings. A few of these school buildings still exist, but not for the same use, nor are they all in their original locations.

Two Mansfield men were recognized as superior craftsmen in the 18th century. Their work was of such high quality that they would have been considered artists if they were alive today. Benjamin Hanks (1755-1824) was an inventor and maker of clocks, brass cannons and church bells, as well as a textile manufacturer. In 1776, he presented his father with a tall case clock with a mechanism that played 12 tunes; the clock stands today in one of the diplomatic reception rooms of the State Department in Washington, D.C. Another clock-maker, Jacob Sargeant (1761-1843), opened a clock and silversmith shop in Mansfield Center, just south of the large gambrel-roofed house on Rt. 195, near the junction of Bassetts Bridge Road. About 1787 he moved to Springfield and later on to Hartford, where he made clocks as well as gold and silver jewelry. He became a leading silversmith in Hartford.

Several Mansfield men took part in the French and Indian War that started in 1754 at a wilderness fort near present-day Pittsburgh, Pennsylvania. The war was a prelude to the European conflict known as the Seven Years' War (1756-1763), which was fought between England and France and their allies. The Treaty of Paris in 1763 ended both conflicts and confirmed Britain's claim to a large portion of the North American continent. The war also served as a training ground for the colonial militiamen, who would be fighting again within 15 to 20 years, but this next time against their parent country, England.

One of the high points of Mansfield's history occurred on October 10th, 1774, when the townspeople voted to adopt their own "Declaration of Freedom", some

twenty-one months before the country proclaimed its "Declaration of Independence" from England. The following year, when the Lexington alarm signaled the start of actual combat, 93 Mansfield men marched off to war under the command of Lieut. Col. (later Colonel) Experience Storrs. In all, over 260 men from the Town fought in various battles throughout the Revolutionary War, and the townspeople again and again sent supplies of food, clothing, ammunition, even flintlocks made in Mansfield, to aid the war effort. Connecticut was called the "Provision State" during the War, and northeastern Connecticut was a major source of these provisions. Ironically, after the War was over, Mansfield voted "No" on the question of ratification of the new United States Constitution.

After the Revolutionary War, in 1797, the State Legislature established the Boston Turnpike Company, which was charged with improving and maintaining an existing road (present Route 44) leading from Hartford to Boston. Tolls for it were collected in an office just west of what is now Mansfield Four Corners. Other turnpikes were built through Mansfield in the early 19th century. Early examples include the New London to Stafford turnpike (present Route 32) and the Norwich to Tolland turnpike (present Route 195).

4. The Nineteenth Century and the Industrial Revolution

As Mansfield entered the nineteenth century, the focus of its economy, while still keeping an agrarian base, turned increasingly to industry. Although the Industrial Revolution generally bypassed the hill villages and Mansfield Center, (agriculture and small shops remained the economic backbone of these areas), it did seem to invigorate the rest of the town. Starting early in the century, there were noticeable increases in industrial activity, with many new mills being built, although these were still small and waterpowered. Several developments, all happening at about the same time, account for the increase: the success of the Industrial Revolution in England; America's growing prosperity, especially in agriculture; and the sudden need to be an independent producer of goods in order to survive blockades and to wage wars (both the Revolutionary War and the War of 1812). Finally and most importantly, the country had become a sovereign nation with a sovereign people ready and eager to trade with the rest of the known world, especially since the English markets were closed to Americans just after the wars.

By the mid-nineteenth century, a variety of products was produced here in Mansfield, according to an 1845 inventory, as cited in the 1974 Chronology of Mansfield, Connecticut, published by the Mansfield Historical Society. The manufactured goods that were produced in town in this one year were: spectacles, machine tools, knitted hosiery, augers, bits, gimlets, combs, leather from three tanneries, steel products, lead pencils, hats and caps, bells and other castings, and, of course, textiles - cotton and silk. This latter industry was Mansfield's most notable with five silk mills, plus a silk carding mill, all listed in the 1845 inventory. There were also other industries that existed in town in the 19th century, but were not listed because they existed either before or after the inventory, such as a clover seed mill, an axe handle and wheel spoke factory, a shoddy mill (which made an inferior quality felt fabric from reprocessed rag and shredded woolen and cotton wastes), one or two bone mills, a linen and cotton mill, a woolen mill, a bark mill and a sumac mill. In 1873 an organ pipe factory was started in Merrow and was moved to Mansfield Depot three years later. Many of these

businesses were short-lived. For instance, in Merrow a gunpowder mill was begun in 1811 to supply the War of 1812, but it blew up for the second (and last) time in 1830 and thus was not included in the 1845 inventory. Additionally, numerous blacksmith shops, cider mills, sawmills and gristmills located throughout town also were left off the inventory.

New products were invented here as well: the buzz or circular saw by Daniel Hartshorn and the screw auger by Nathan Palmer and Andrew Hartshorn. The Hanks family was one of Mansfield's most inventive; for example, in 1810, Rodney and Horatio Hanks invented the double wheelhead for spinning silk, and that same year built the first silk mill in America at Hanks Hill. (This small building, only twelve feet square, was removed in 1930 to Henry Ford's industrial museum at Greenfield Village in Dearborn, Michigan.)

Silk was Mansfield's dominant industry in the nineteenth century, having been started around 1760 by Dr. Nathaniel Aspinwall, who introduced the mulberry tree and the silkworm to the town. Silk culture started as a "cottage" industry with a good many households in town taking part. By the nineteenth century, the industry was flourishing and Mansfield was recognized as one of the silk industry's leading towns. As John Warner Barber stated in his 1838 Connecticut Historical Collections, "...a larger quantity of silk is manufactured in Mansfield than in any other place in the United States."

Unfortunately, soon after Barber's statement appeared, the "cottage" portion of the industry collapsed, due mainly to a financial crisis in 1837, then a blight on the mulberry trees, followed by a severe storm in 1844 that destroyed the remaining trees. The bigger mills survived, however, as they were able to switch to silk cocoons imported from the Orient, and these mills thrived for several decades more. The 1869 Tolland County Survey Map of Mansfield listed eight companies that manufactured various types of silk threads, machine twists and fringes. L.D. Brown & Son was listed as being in Mansfield Center, but his mills were in Atwoodville and later in Middletown, Connecticut, and his sales rooms were in New York City and Boston. His business was just one example of several that were located in part outside of town but still considered as Mansfield businesses. According to the 1869 map, there were silk mills in Atwoodville, Chaffeeville, Conantville, Gurleyville, Hanks Hill and Mansfield Hollow. Mansfield's silk manufacturers achieved fame and won national awards for the quality of their products; and one, Ebenezer Gurley, became quite wealthy after "cornering" the New York silk market in the late 1860's.

However, at the start of the twentieth century, the industry began to die out, the last mill shutting down in 1928. Today only one silk mill building is left in town, located on the east side of Hanks Hill Road. Converted to a button factory early in this century, it is now an artist's studio. The only other visible remnants of the silk industry are a few mulberry trees and mill foundations and road names such as Wormwood Hill and Mulberry roads. These are all that is left of a vibrant industry and a unique chapter in Mansfield's history.

The 1869 Tolland County Survey Map showed only four mills that did *not* make silk: cotton at Eagleville; knit goods ("stockinettes") at Merrow; axe handles and wheel spokes at Mt. Hope; and the shoddy mill at Mansfield Depot. Compared to the 1845 inventory, this was a small number and reflected the impact the War

Between the States (the Civil War), 1861-65, had on small businesses. However, the Eagleville Mill did well during that war as the result of having received a government contract to make Springfield-type musket rifles. After the Civil War the Eagleville Mill returned to cotton manufacture.

Most of Mansfield's manufacturers fared poorly during the Civil War. The Town sent a total of 155 men off to fight, but on their return the soldiers found many mills idle, the major exception being the flourishing silk industry. The Town's population dropped precipitously during the war, but the actual decline had started around 1830 and continued until 1910. It was in the latter half of the nineteenth century that people moved west or on to the bigger cities for better jobs. The advent of steam power allowed bigger factories to be built in locations closer to their markets, and since water power was no longer a necessity, the larger companies were bypassing Mansfield, except at Eagleville and Mansfield Hollow.

The building of the railroads was also a big factor in the changing locations of factories. The cotton mill at Eagleville, started in 1814, was given an economic "boost" when the railroad tracks were laid along the Mansfield side of the Willimantic River in 1847. The mill became one of the largest in town, and had many small workers' houses built nearby. The mill was in operation until 1956, when it was burned to the ground. The property, including the dam, pond and water rights, was sold to the State of Connecticut in 1967.

The Kirby Mill in Mansfield Hollow was another large mill, built of stone in 1882. It is now one of only two stone mills still standing in town. This mill, built on the location of earlier eighteenth and nineteenth century mill sites, had housed various industries before it was sold to the University of Connecticut in the 1960's. Viewed from the vantage point of the Mansfield Hollow Dam, the Kirby Mill seems to fulfill the Industrial Revolution's ideal of a "machine in a garden". The neighboring houses in the Hollow serve as an excellent example of an early nineteenth century mill village. The typical history of small New England mill villages was that big cities grew up around the mill and enveloped the village. However, this did not happen in Mansfield Hollow. All the 19th century mill villages in town were built on a small scale, and all have remained so. In addition to Eagleville and Mansfield Hollow, good examples of 19th century mill villages can be found in Atwoodville, Gurleyville, Hanks Hill, Mansfield Depot, Merrow, Mt. Hope and Conantville.

Four local artists practicing in the nineteenth century were George Freeman, miniaturist and portrait painter of Queen Victoria, whose work was posthumously exhibited at the Metropolitan Museum in New York; Thomas S. Cummings, artist, author, professor of art and founder of the National Academy of Design in New York; Edwin Fitch, master builder and one of Connecticut's first architects; and Rand White, master stone mason, who started the Dewing Wall on Browns Road, but died before its completion in 1884.

Around mid-century, two institutions were formed to aid poor and needy townspeople. From 1861 to 1922, the Town supported a poor farm (called the Mansfield Poor House) on Maple Road, run by the Barrows and Gardiner families. The farm supplanted the Town's previous measures for providing for the poor, whose care and concerns, according to Town Meeting Minutes, were met as early as 1719.

The other institution was a home and school for the orphans of Civil War soldiers, founded in 1866 and located in North Mansfield on the southwest corner of North Eagleville Road and present-day Route 195. Although the orphanage had closed by 1881, its buildings and surrounding land, together with a gift of money donated by Mansfield natives Charles and Augustus Storrs, formed the basis of a new small agricultural school, which eventually would become the University of Connecticut at Storrs. Established by the State as the Storrs Agricultural School, it opened in September of 1881 with three faculty members and twelve students. In 1893, the school became a land-grant college and in 1899, the Connecticut Agricultural College. The school's rapidly-changing status foreshadowed its period of growth in the middle of the next century and its pivotal role in Mansfield's economic and social development and future land use decisions.

5. The Twentieth Century

The "Era of Education" was the label given in the 1974 Chronology of Mansfield to characterize the focus of the Town during the whole of the twentieth century. However, it could be argued that this "Era" did not start until after 1939, when the Connecticut Agricultural College officially became the University of Connecticut.

Before 1939 and, in fact, during the entire first quarter of the twentieth century, the population figures for the Town were very low. It was not until 1930 that the census figures exceeded those of 1820, the original high point in Mansfield's population. Even the 81 soldiers sent to serve in World War I (1914-18) represented a decrease. The population was at its lowest level in 1900 and 1910, well below the figures from 1774 to 1850 (see population chart at the end of this section).

One of the reasons for the low census figures in Mansfield was the closing of the smaller mills, including the silk mills, at the beginning of the twentieth century. Similarly, factories were shutting down throughout New England, especially after World War I, when many businesses moved to the South, where operating costs were lower. Only a few big mills remained active during World War I, and two of those converted to products needed for the war. The Eagleville Mill produced a fabric of closely-woven cotton to cover airplane wings, and the Kirby Mill in the Hollow made brass primers for British guns. Both of these mills continued to make a variety of products throughout the Great Depression in the 1930's and World War II (1941-1945), before finally closing down in the 1950's. A similar fate befell the Conantville Mill, except that after closing as a mill, it reopened as a club called the Shaboo Inn, which featured rhythm and blues music as well as all other kinds of contemporary popular music. It burned to the ground in 1982. The closing of these three mills virtually ended manufacturing in town.

With the mills gone at mid-century, Mansfield's industrial employment opportunities disappeared. Fortunately for the Town, this decline was offset at almost the same time by a significant rise in employment at the University of Connecticut, which was embarking on a program of expansion. The University's greatest period of growth occurred during the 1950's and 1960's, under Presidents Jorgensen and Babbidge. At this time, the University became the largest single employer in the Windham Region, a position it continues to hold.

In addition, the 1950's saw the construction of the Mansfield Hollow Flood Control Dam, which created a number of temporary jobs between 1949 and 1952. The flooding of the low areas inside the dike system significantly changed the land use of those parcels now submerged. These include the former Turnip Meadow and portions of the villages of Mansfield Hollow and Chaffeeville. At the same time, a good part of the area inside the dike was turned into a park with ball fields, hiking trails and a boat launch area. The park is currently leased to and operated by the State of Connecticut.

Another government enterprise in town that has affected land uses was the Mansfield Training School. Started in 1858 and moved to Mansfield in 1911, it grew in prominence and size for over fifty years before being downsized by the State in recent years. The Training School is scheduled to be fully closed before the end of 1993. The State Department of Corrections has taken over four Training School buildings on the north side of Route 44, and there are plans under way to utilize other buildings and portions of the land for other purposes (see Chapter IX, Section A.4).

In the twentieth century, the focus of agriculture shifted from the diverse products of the self-sufficient family farm of the eighteenth and nineteenth centuries to the single product of the specialized farm of this century. Although the number of farms began to decline throughout the state at the turn of the century, farming in Mansfield did not drop dramatically until about 1955. Prior to that time the number of farms declined, but the average acreage per farm increased, indicating that many smaller farms were being consolidated into fewer, larger farms. The dairy industry (first butter and cheese, then milk) became dominant in the early twentieth century and the trend toward consolidation of dairy farms has continued to the present. Mansfield today has two large dairies and several smaller cattle and hay farms. One such farm, Mountain Dairy, has been operated by the Stearns family at the same location for about 200 years. A neighboring farm, the Martin Farm, has recently sold to the State the development rights to some of its acreage in an effort to keep the land for agricultural use in perpetuity. The poultry industry has a different "timeline". During the 1930's, several poultry farms were started in Mansfield, and the poultry industry (mainly broilers and eggs) grew and thrived until the late 1970's. After that the number of poultry farms decreased and only a few (presently three) remain active.

Of all the technological changes that have occurred in the twentieth century, the invention of the automobile has had the greatest impact on land use. The patterns of development in this century are generally linear, along roadways, as compared to patterns of earlier centuries that were "clustered" around core villages. In New England the core or nucleus of a village was often a church, a mill and/or a village green. In Mansfield a few churches and mills survive, and three village greens remain as focal points of the Town's existing historic villages, which today number 13. Following an historical example, one recent subdivision, Freedom Green, was designed for the most part around its village greens, and could be considered an example of twentieth-century "cluster" development. This is a case in which today's designers have captured the look and feel of an early village by using eighteenth-century colonial land patterns and structural details.

In 1956, planning and zoning was established in Mansfield when the Town voted to create a planning commission and a zoning appeals board. Subdivision regulations were adopted in 1957, and two years later the Town adopted zoning regulations. In 1963 the Conservation Commission was formed, and in 1974 regulations governing inland wetlands and watercourses were put into effect. Town government changed in the 1970's from three-member Board of Selectmen to a Town Council/Manager form with an elected Town Council, Board of Education, Planning and Zoning Commission/Inland Wetland Agency and Zoning Board of Appeals. The Annual Budget is approved by Town Meeting. The Town has been a member of the Windham Regional Planning Agency since 1967.

As the twentieth century draws to a close, the most recent land use changes and population increases have not come as much from the University as from an increase in multi-family dwellings located near the University campus and from suburban subdivision developments dispersed throughout the town. However, the University very much remains the primary source of employment with the Town's retail shops and restaurants providing the second-most number of jobs. There are still no industrial operations in town and only a small number of working farms. In general, throughout the state, agricultural land has been developed for other uses, especially since the 1950's. A state farm census of 1959 indicated 8,266 Connecticut farms were in operation at that date. By 1972, only 13 years later, the number had decreased by almost half. This trend is applicable to Mansfield as inactive farmland has been converted to active residential use.

The Town has purchased several parcels of land both for open space and for the building of Mansfield Middle School, Schoolhouse Brook Park and Bicentennial Pond. Mansfield residents voted their approval of two separate referenda authorizing the purchase of open space, once in the 1970's and again in 1991. The land for Middle School and Schoolhouse Brook Park was bought in 1957, 1975 and 1986.

Looking ahead to the twenty-first century, the Town Council recognized the need to set up a strategic planning committee in order to study and make recommendations on how best to prepare the Town to meet the challenges of the next century. Many townspeople volunteered to serve, and in 1992 the 2002 Strategic Planning Report was completed. Pertinent information from the report has been incorporated into this 1993 Plan of Development.

Total Population

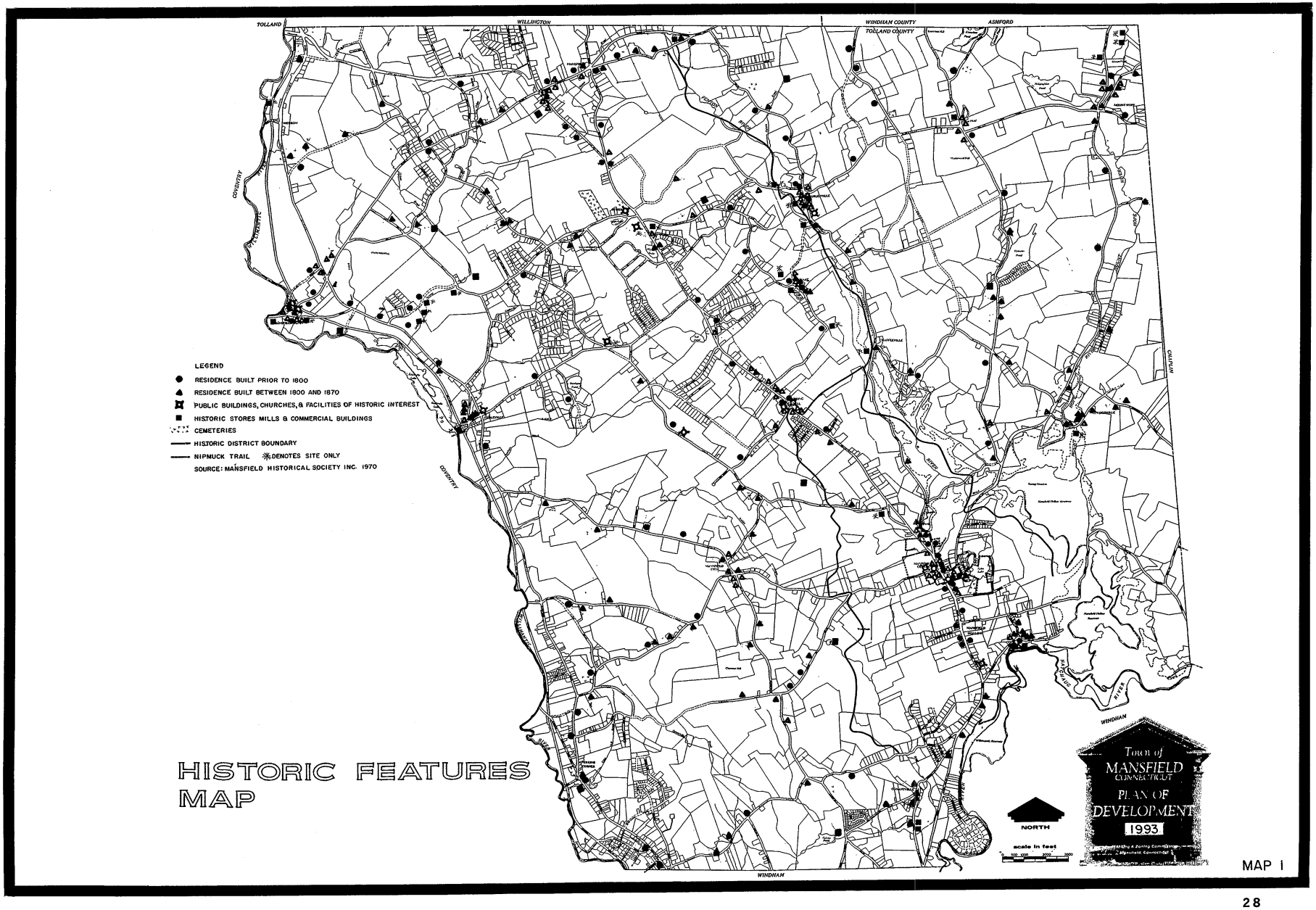
Year	Population	Persons in Households	Persons in Group Quarters
1756	1,614		
1774	2,466		
1782	2,565		
1790	2,635		
1800	2,560		
1810	2,570		
1820	2,993		
1830	2,661		
1840	2,276		
1850	2,517		
1860	1,697		
1870	2,401		
1880	2,154		
1890	1,911		
1900	1,827		
1910	1,977		
1920	2,574		
1930	3,349		
1940	4,559		
1950*	10,008	5,442	4,566
1960*	14,638	7,744	6,894
1970*	19,994	11,040	8,954
1980*	20,634	11,029	9,605
1990*	21,103	12,183	8,920

* Includes Group Quarters (Prior to 1950, individuals residing in Group Quarters were not included in Mansfield's Population Census)

B. Historic and Archaeological Resources

This Plan of Development emphasizes the importance of preserving historic structures, historic neighborhoods and other historic and/or archaeological resources. The future character of Mansfield will be influenced greatly by the Town's success in preserving its historic and archaeological heritage for the public's education and enjoyment. Land use policies and decisions consistent with this plan must take into account and minimize or prevent detrimental impacts on the Town's significant historic and archaeological resources.

The attached historic features map (Map #1, 1970 Mansfield Historical Society Map with some minor revisions), Historic Sites Map, (Map # 2, Mansfield Historical Society Map, updated with the assistance of Mansfield's Town Historian), Cemeteries Map (Map #3, compiled by Planning and Zoning Commissioner K. Holt) and Archaeological Assessment Map (Map # 4, prepared by the State Archaeologist's Office) provide important information for identifying sites and structures that warrant protection. However, each new land use proposal in Mansfield that is under the jurisdiction of the Planning and Zoning Commission should be reviewed on a case-by-case basis to identify historic and archaeological resources and to protect any identified significant resources from adverse impact. It is important to note that many archaeological sites are located near wetland or watercourse areas. In addition to dam and mill sites, Native American sites are concentrated primarily along rivers, lakes and other watercourses or waterbodies. Through the adoption of compatible zone classifications and permitted use provisions and a careful use of architectural design and buffering elements, new development can be integrated into areas adjacent to significant historic and archaeological resources. It is important to note that in working toward this goal, the Planning and Zoning Commission must act within the legal structure formulated by Connecticut's Statutes and case law.



HISTORIC FEATURES MAP

MAP 1

HISTORIC SITES IN MANSFIELD

(Additional historic structures are located within designated Historic Districts and/or are depicted on this Plan's Historic Features Map)

Atwoodville
1 - Site of silk mill, Atwood & Crane, 1850-1870

Chaffeeville
2 - Site of silk mill, O.S. Chaffee & Son, mid-19th century

Chestnut Hill
3 - Stearns Farm
4 - Chestnut Hill School (now a residence)
5 - Wolf Rock

Conantville
6 - Silk mills, founded mid-19th century
7 - Atwood Machine Co., 1870 (now a residence)

Eagleville
8 - Site of Eagle Co. mill, 1st cotton mill in town, early 19th century
9 - Champlion's General Store
10 - St. Joseph's Church
11 - Schoolhouse, 1869, now used by Joshua's Trust
12 - Site of 18th century grist mill, latterly called bone mill
13 - Site of18th century fulling mill
14 - Site of Ephraim Gurley's iron-works, end of 18th century
15 - Site of 18th century saw mill
16 - Samuel Gurley's orchard, mid-18th century
17 - Gurley ("Pink") Cemetery
18 - Jesse Bennet house, ca. 1720

Gurleyville
19 - Stone grist mill, mid-18th century
20 - Birthplace of Gov. Wilbur L. Cross, (1862-1948)
21 - Site of Ephraim Gurley's foundry, ca. 1800, then site of second silk mill, ca. 1830
22 - Site of Methodist Church, 1825-1947
23 - Gurleyville Cemetery
24 - Site of silk mill, Royce's (1840), then Smith's (1862)
25 - Schoolhouse, 1876 (now a residence)
26 - David Royce house, 1735

Hanks Hill
27 - Hanks Reservoir (Tift Pond)
28 - Site of first silk mill in U.S., H. & R. Hanks, 1810
29 - Site of Hanks brass cannon & bell foundry, ca. 1800

Mansfield Center
30 - Town pond, from which the Center was at first called "Ponde Place"
31 - First Church, Congregational, founded 1710, present building 1866 (Edwin S. Fitch)
32 - Barrows & Burnham store (1886)
33 - Old Mansfield Center Cemetery
34 - Town pound, ca. 1801
35 - Former Mansfield Center Library, site of school
36 - Eleazer Williams house, 1710
37 - Site of 18th century tannery (1777)
38 - Red Spring
39 - Turnip Meadow
40 - Edwin Fitch mansion, 1836
41 - Col. Experience Storrs house, ca. 1753
42 - Dewing wall, 1884
43 - Samuel Sargeant house, 1782
44 - Martin Phillips house, ca. 1820
45 - Site of clover mill

Mansfield City
46 - Mansfield City school (now a residence)
46A - Gersham Barrows house, ca. 1765

Mansfield Depot
47 - Organ factory
48 - Thompson's store
49 - Reynolds house, ca. 1814
50 - C. Green house, ca. 1730

Mansfield Four Corners
51 - Site of 18th century Fuller Tavern
52 - Site of tollhouse for turnpike
53 - School (now a residence)
54 - Turner house, ca. 1800
55 - Slafter house, ca. 1765
56 - Calkins house, ca. 1831
57 - Site of 18th century sawmill & 7 historic shepherd's stones

Mansfield Hollow
58 - Mill, present building 1882 (Kirby Mill)
59 - School (now an apartment house)

Merrow
60 - Site of Merrow mill, first powder mill in U.S., 1810-1826, later a knitting mill. The millstones from the powder mill are at the Mansfield Historical Society Museum.

Mount Hope
61 - Site of 19th century axe helve factory
62 - Site of 19th century shingle and grist mill
63 - Site of 19th century bone mill
64 - Miner-Grant house, ca. 1740

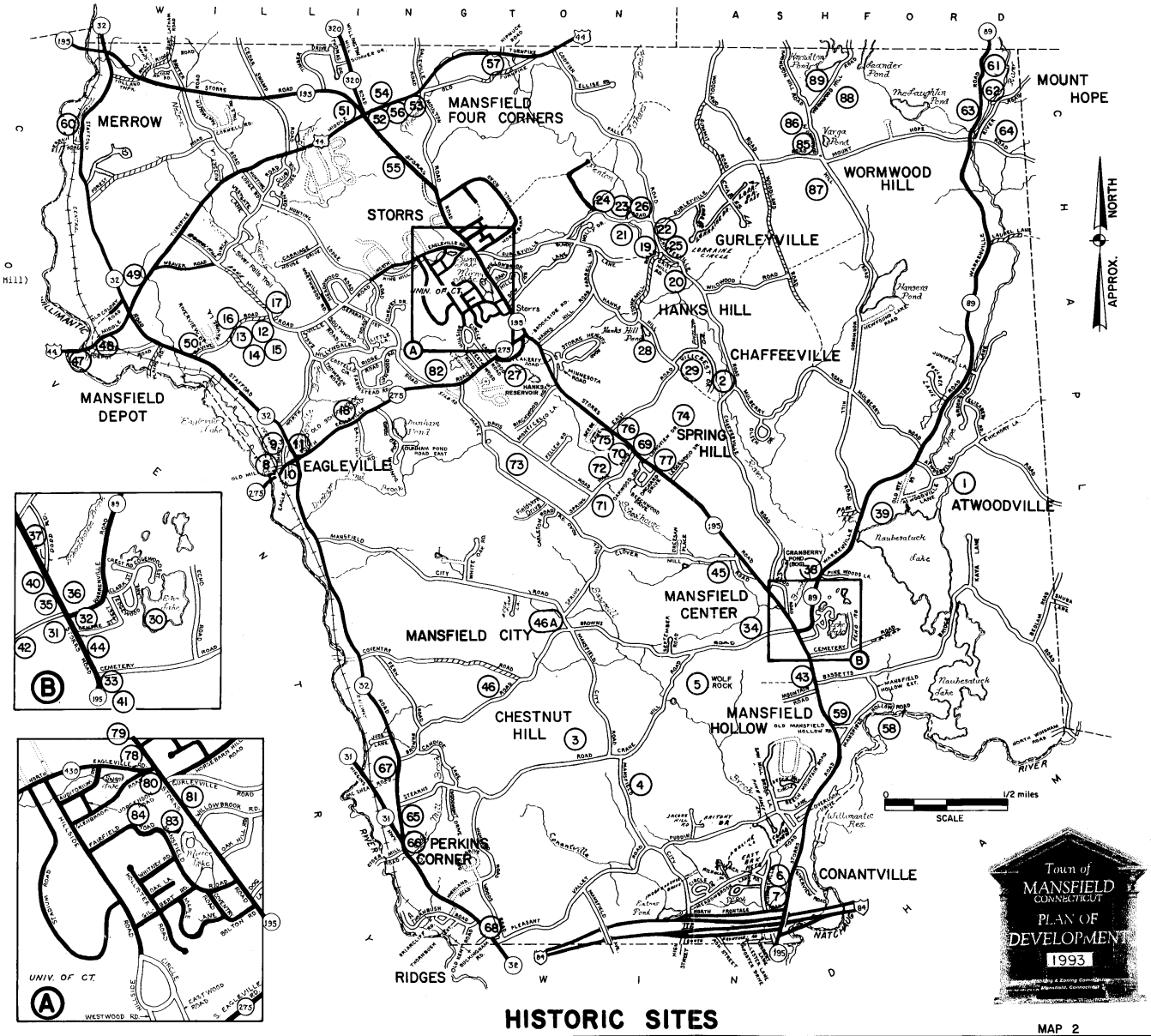
Perkins Corner
65 - House (ca. 1717) of Joshua More, founder of school which became Dartmouth College
66 - Mill pond
67 - Robert Barrows house, ca. 1725

Ridges
68 - School (now ell of a residence)

Spring Hill
69 - Town Hall, 1843
70 - First Baptist Church, founded 1809, present building ca. 1874
71 - Hillside Cemetery
72 - School (now a residence)
73 - Alms House or Town Farm (now a residence), ca. 1730
74 - Fifty Feet cliff
75 - Isaac Sargeant house (Altnaveigh Inn), ca. 1740
76 - L. Kingsley house, ca. 1807
77 - Nathan Barrows house, ca. 1809

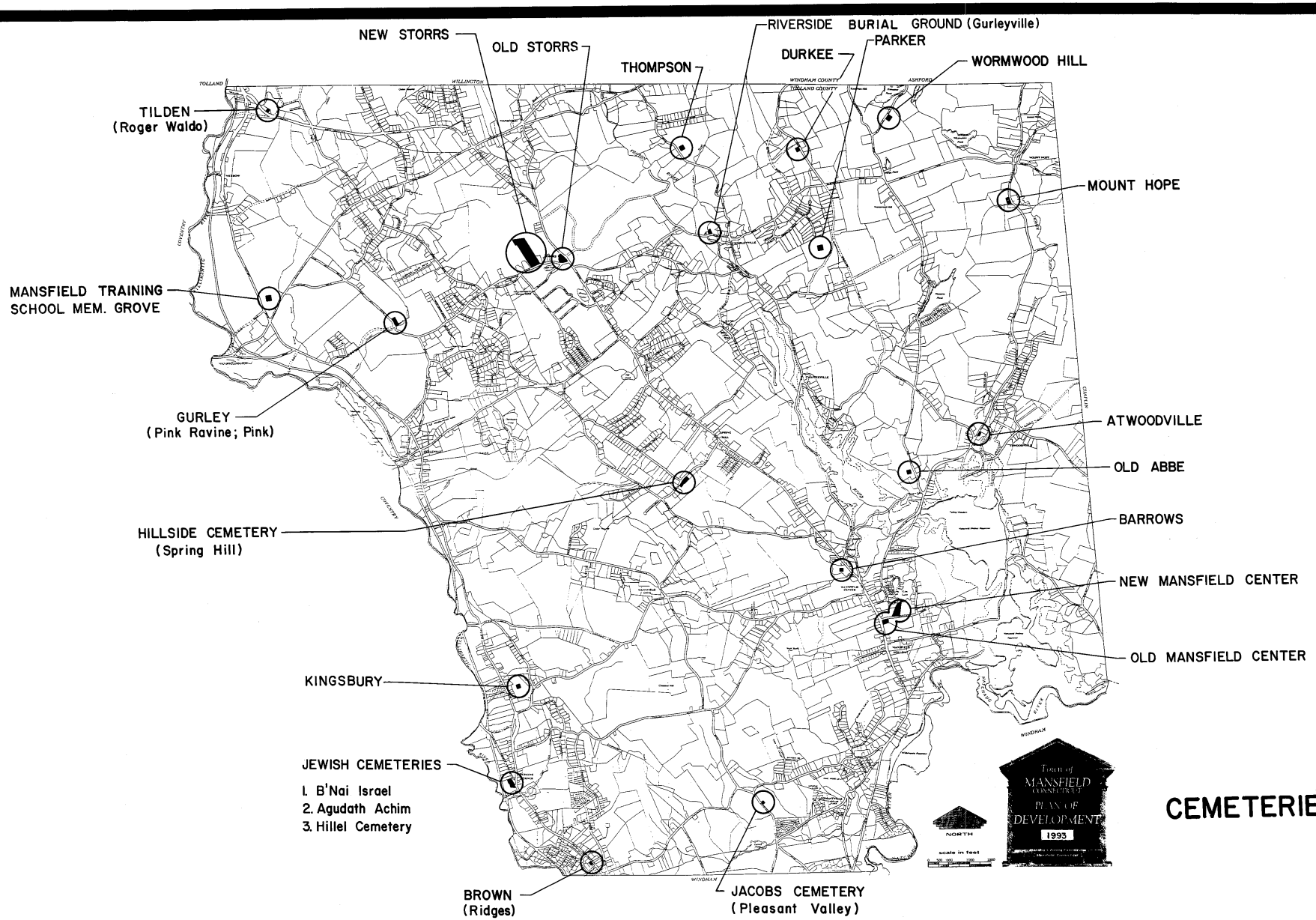
Storrs
78 - Storrs Congreg. Church, founded 1737, present building 1927
79 - Old Storrs Cemetery
80 - Site of Whitney Hall
81 - Site of tannery
82 - Site of Separatist Church, ca. 1746
83 - Gulley Hall, 1908
84 - College Beanery (Benton Museum)

Wormwood Hill
85 - Site of Methodist Church, 1797
86 - Former bit & auger shop, steel-yard and gimlet shop
87 - School (now a residence), 1796
88 - Wormwood Hill Cemetery
89 - Reed house, ca. 1780



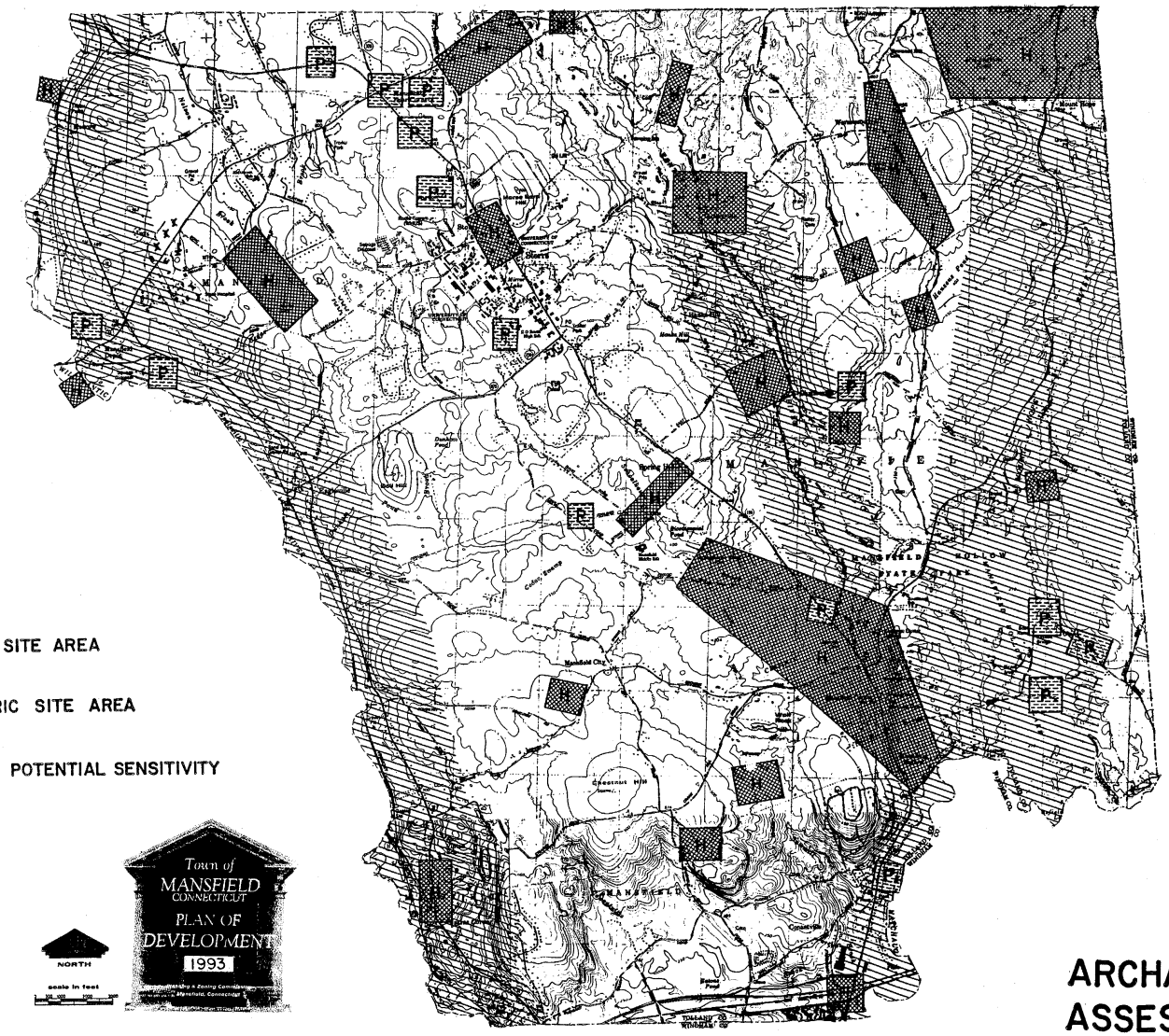
HISTORIC SITES

MAP 2



CEMETERIES

MAP 3

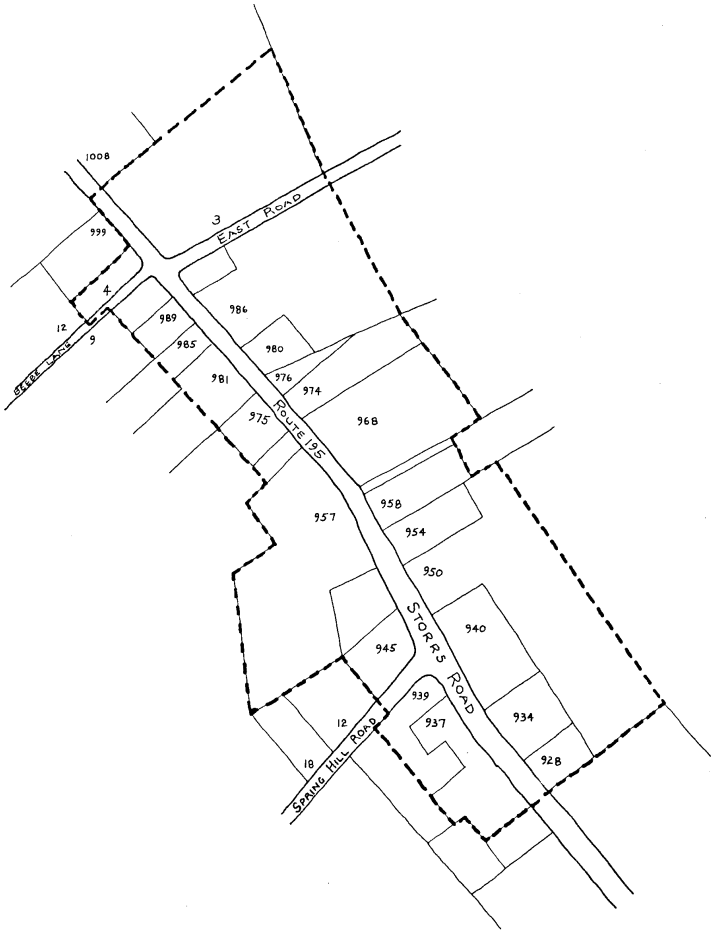


ARCHAEOLOGICAL ASSESSMENT MAP

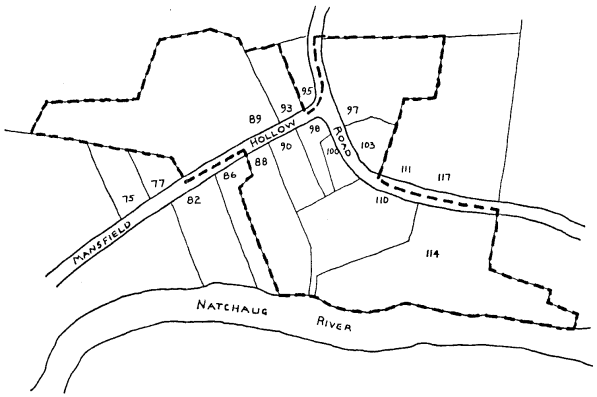
MAP 4

C. Historic Districts

Six separate Historic Districts have been established in Mansfield and are included in the National Register of Historic Sites. Only three of these Historic Districts (located in the Mansfield Hollow, Mansfield Center and Spring Hill sections of town) are under the jurisdiction of Mansfield's Historic District Commission. Maps 5 and 6 depict the three Historic Districts under local control. Additional Historic Districts located in Gurleyville, on the University of Connecticut campus and on the former campus of the Mansfield Training School are not within the jurisdiction of the Mansfield Historic District Commission. The level of control that may be exercised by a local Historic District Commission over exterior alterations within defined Historic Districts ensures the protection of the area's historic character. For this reason, this Plan encourages the expansion of existing local Historic Districts and the establishment of additional local Historic Districts.



SPRING HILL



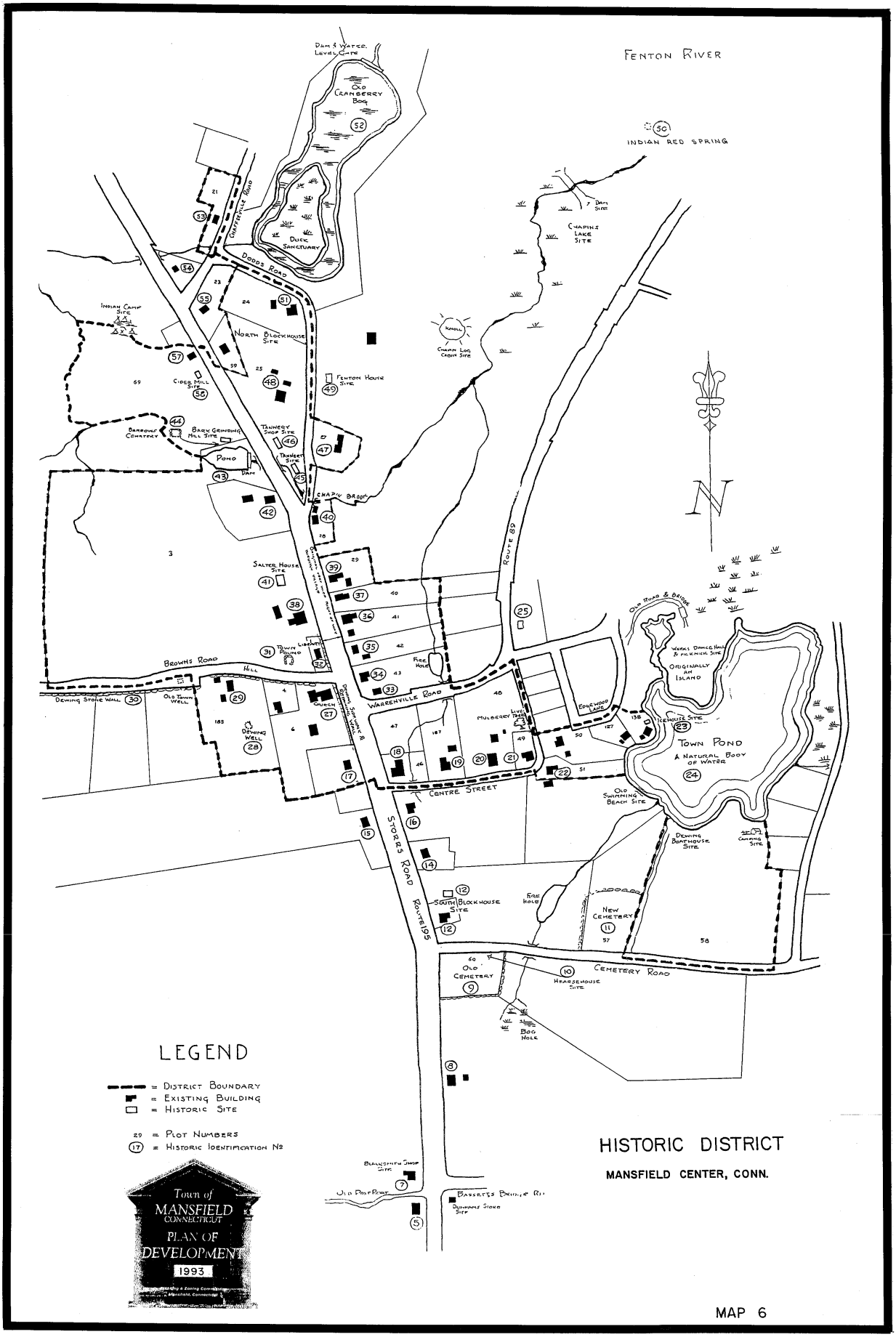
MANSFIELD HOLLOW

HISTORIC DISTRICTS

MANSFIELD, CONN.

Town of
MANSFIELD
CONNECTICUT
PLAN OF
DEVELOPMENT
1993

MAP 5


FENTON RIVER
Dam & Water Level Gate
Old Cranberry Bog
INDIAN RED SPRING
Chapins Lake Site
Duck Sanctuary
Dodds Road
Chatterdale Road
North Blockhouse Site
Indian Camp Site
Cider Mill Site
Fenton House Site
Knoll
Charm Lea Cabin Site
Barrows Cemetery
Bark Grinding Mill Site
Tannery Shop Site
Tannery Site
Pond
Dam
Chapin Brook
Salyes House Site
Route 89
Old Road & Bridge
Works Dance Hall & Picnic Site
Originally An Island
Town Pond
A Natural Body of Water
Icehouse Site
Edgewood Lane
Mulberry Tree
Town Library
Browns Road
Hill
Deming Stone Wall
Old Town Well
Deming Well
Queen
Deming Store Site & Tavern
Warrenville Road
Fire Hole
Centre Street
Old Swimming Beach Site
Deming Boathouse Site
Camping Site
Stores Road Route 195
South Blockhouse Site
New Cemetery
Old Cemetery
Cemetery Road
Hearsehouse Site
Bog Hole
Blacksmith Shop Site
Old Post Road
Bassett's Bridge Rd.
Dunham Store Site
N
LEGEND
= District Boundary
= Existing Building
= Historic Site
29 = Plot Numbers
(17) = Historic Identification No.
Town of MANSFIELD CONNECTICUT
PLAN OF DEVELOPMENT
1993
HISTORIC DISTRICT
MANSFIELD CENTER, CONN.
MAP 6

D. Historic Villages

In the past, Mansfield was separated into nineteen villages based on population density, local custom and each area's unique agricultural or industrial past. Typically, each village area contained religious and educational facilities and commercial establishments that served the local population. The villages grew in a cluster pattern near roadway intersections, with groupings of closely sited structures surrounded by large expanses of open space in the form of farmland and/or woodlots. This pattern of development promoted safety, social interaction and a sense of community often missing in the suburban development patterns of the twentieth century. Over time, roads have been expanded and core village structures have been destroyed or altered. Village greens have decreased and high-speed vehicular traffic has separated village neighbors. Several of Mansfield's early villages have been destroyed or significantly altered. However, most of our Town's village cores remain, with historic attributes and community character deserving of preservation and protection.

This Plan of Development encourages policies that protect and preserve the core areas of Mansfield's thirteen remaining villages. These villages are, in alphabetical order, Atwoodville, Eagleville, Gurleyville, Hanks Hill, Mansfield Center, Mansfield City, Mansfield Depot, Mansfield Four Corners, Mansfield Hollow, Merrow, Mount Hope, Spring Hill and Wormwood Hill. The locations of these villages are depicted on Map #7, and the following sections provide information on the current status of each area, potential threats and recommended preservation actions. Much of the information on each village area was compiled by the Town's 2002 Historic Preservation Committee.

1) Location: **ATWOODVILLE**

Boundaries: Along Atwoodville Rd. from the intersection of Warrenville Road past historic houses northeast of the Mt. Hope River. This district includes about nine existing houses.

Description: The village is named for the Atwood family, which manufactured silk by machinery here, beginning in 1829. Other mills followed, including one to make machinery for use in silk manufacturing.

Current Status: All of the houses shown on the 1869 Town Map continue to exist. Remnants of the old mill foundations may be seen along the banks of the river, including a beautiful arched sluiceway. The roadbed and bridge were raised after the 1938 flood.

Threats: Presently, Atwoodville is not threatened. However, because the houses are very close to the road, widening or realignment of the road surface could have a detrimental impact on the village.

2. Location: **EAGLEVILLE**

Boundaries: The village extends along South Eagleville Rd. (Rt. 275) from properties bordering Stafford Rd. (Rt. 32) on the east to the Willimantic River on the west. It includes the side streets Shady Lane, Eagle Court and Old Mill Court, as well as the old school house on the corner of South Eagleville Rd.

and Stafford Rd.

Description: Eagleville was predominantly farmland until 1814, when the Willimantic Cotton Manufacturing Company built a factory using the ample water power in the area. Other factories followed, most notably, Eagle Manufacturing, which made cotton products and firearms and, finally, shoes. These factories remained active until 1956. Eagleville also served as an important freight and passenger rail depot in town. The first Catholic church in town was built in 1935 in Eagleville.

Current Status: The village of Eagleville is a mixture of 18th century farm houses and 19th century buildings associated with the housing of mill workers. The old company store continues as a private general store. Eagleville Dam has evolved to a popular recreational area. None of the old mill buildings remain. The old school, built in 1869 and expanded in 1912-13, is now owned by the Town of Mansfield.

Threats: Eagleville could be threatened if Rt. 275 were straightened/widened within or close to the existing right-of-way. This village has the shallowest front yard setbacks in town, making any alteration potentially threatening.

3. Location: **GURLEYVILLE**

Boundaries: The village runs along Gurleyville Rd. from Pumping Station Rd. on the west to properties bordering Chaffeeville Rd. and Codfish Falls Rd. on the east. This district extends northerly on Codfish Falls Rd. to the current Kessell home, 97 Codfish Falls Rd., and southerly on Chaffeeville Rd. to the southern extension of Stonemill Rd.

Description: Gurleyville was settled in the early 18th century, but its village atmosphere was not established until the early 19th century with the introduction of a second mill in the area by the Gurley family. By 1850, Gurleyville boasted four mills, three stores and a church. While the village had an industrial root, most of the surrounding land was used for farming and wood lots until quite recently. A stone gristmill built in 1835 still exists and is owned as a museum by Joshua's Tract and Historic Trust. Located opposite the mill is the birthplace of Wilbur Cross, Governor of Connecticut from 1931 to 1939.

Current Status: Many of the 18th and early 19th century homes in the area remain. All of the mills (except the restored stonemill) are gone. The stores either have been removed or converted to private homes. The church is gone. The village retains an architectural harmony, but increased road widths at the Gurleyville Rd./Chaffeeville Rd./Codfish Falls Rd. intersection have decreased the size of a small green which served as a public meeting place. Frontline setbacks, which never were very deep in this village, also have been whittled down over time. The village is not currently under heavy development pressure. Most of the surrounding lots have been built upon. While some of the current homeowners have built additions to their homes, the look and feel of the village has not been seriously compromised. This is a Federally designated Historic District.

Threats: Potential threats to this village include:

1. substantial or incompatible development in the village or along the Fenton River;

2. large increases in traffic volume which would undermine the structural and social integrity of the village; and any road widening could have a negative impact on the village green.

4. Location: **HANKS HILL**

Boundaries: The village is bounded on the north by the Farrell/Clark farm on Farrell Road, and it extends southerly along both sides of Hanks Hill Road to the southern end of Hanks Pond. This village also includes properties on both sides of the currently paved portions of Stonemill Road.

Description: This village was settled in the late 18th century, but gained prominence in the 19th century as the site of the first silk mill in America, now in the Henry Ford Museum in Michigan. The village contained silk mills, a brass cannon and bell foundry and several farms.

Current Status: Many of the historic homes remain. Of the mills, only the fourth remains. It now serves as a residence and artist's studio. The mill pond and sluiceway are intact. Much of the surrounding land is used for farming, woodland or housing.

Threats:

1. Incompatible or overdevelopment of open space in and around the village would alter its character;
2. Road widening and realignment could harm the village, since many of the historic structures are close to the current road surface.

5. Location: **MANSFIELD CENTER**

Boundaries: Mansfield Center extends along both sides of Storrs Rd. (Rt. 195) from Chaffeeville Rd. south to about 700 feet south of Mountain Rd., to include residences at 423, 424 and 435 Storrs Rd. It extends easterly on Bassetts Bridge Rd., Cemetery Rd., Centre St., Warrenville Rd. (Rt. 89) and Chaffeeville Rd., and westerly on Browns Rd. to the back of the large Dewing stone wall, and includes all of Dodd Rd., Pond Rd. and Centre St. These boundaries are roughly the same as those of the original settlement of Mansfield, except that the original boundaries extended further south along Storrs Rd. to the junction of Mansfield Hollow Rd.

Description: Mansfield Center was the first village settled in town, and is, therefore, the oldest. It was the only Mansfield village in existance when the town was part of Windham, and was originally called Ponde Place. It was surveyed in 1685-1686, and 21 house lots were laid out along the easterly side of a "highway" (present Rt. 195), each house lot being 18 to 24 1/2 rods wide by 40 rods deep, (or 297 to 404 feet wide by 660 feet deep). The first settlers came in 1692, and Old Mansfield Center Cemetery was laid out shortly after, in 1696. In 1703 Mansfield was incorporated as a Town, with the stipulation that a minister be "called to settle over" the residents of Ponde Place. In 1710, Eleazar Williams answered the call, and, although the original church

building has since disappeared, the Williams house still stands (572 Storrs Rd.). In 1986, the Mansfield Historical Society designated the Williams house as the oldest house in town.

During the 18th century, the village grew rapidly and was primarily residential. Interspersed among the houses were orchards, pasture land with a few small mills along the streams (cider, potash and bark mills, a tannery, and cranberry bogs) and a few craft shops (blacksmith, carpenter, clockmaker/silversmith, a maker of fancy silk shoes, and a saddler/harness maker) and several dry goods stores.

Current Status: Most of the 18th and 19th century structures remain in the northern and middle sections of the original settlement. Several of the residences and the Center Church, as well as the Dewing wall and the Old Mansfield Center Cemetery, are recognized as historical and architectural treasures. Commercial buildings in the village often contained residences. Only the northern section has been designated as a Town and Federal Historic District. The Old Mansfield Center Cemetery has recently been made a National Landmark and is now on the National Register of Historic Sites.

Threats: Mansfield Center suffers from extremely heavy traffic flow. Although the Storrs Road right-of-way is wide, some houses and the Town's oldest cemetery are extremely close to the road. Widening or realignment of Storrs Rd. could be detrimental to the integrity of the village and, possibly, to the continued residential viability of homes along it. Rt. 195 has already "eaten up" much of the village green and further widening could negatively impact this important, albeit small, open space.

6. Location: **MANSFIELD CITY**

Boundaries: This district extends along Mansfield City Rd. from the junction of Browns Rd. to Spring Hill Rd. The village includes those houses at the intersection of these roads.

Description: The name, "Mansfield City," first appears in 19th century documents. This area had a number of craftmen/artisans who lived, worked and had their shops here, including a blacksmith shop and, possibly, a tavern. It was more populated in the 18th and 19th centuries than it is today.

Current Status: Although there has been considerable recent residential development in this area, the village remains virtually unchanged. All of the the buildings shown on the 1869 map still exist with few exterior changes. The area now is totally residential.

Threats: This area does not appear to be threatened at this time. Road widening or realignment could have a detrimental effect on the village.

7. Location: **MANSFIELD DEPOT**

Boundaries: This village includes all of the homes along Depot Rd. west of the railroad tracks and all properties along both sides of Rt. 44 between the Willimantic River and the Snow farmland on both sides of Rt. 44, adjacent to State land formerly associated with the Mansfield Training School.

Description: Mansfield Depot was both an agricultural and a mill community in the early 19th century. However, after the railroad was laid in 1847, the village shifted predominantly to the manufacturing of cotton and silk. There was also a shoddy mill. In 1876, Fenelon McCollum began manufacturing organ pipes, after moving his business from Merrow. This venture continued until the early 20th century, when it failed. Most of the structures in the Depot were built in the mid-19th century when farming subsided.

Current Status: The houses, church, store and a later school building all remain intact. The railroad station also remains, although it has been converted to a restaurant use. The old organ pipe mill still stands, although it is in very poor condition.

Threats: Traffic volumes have increased substantially in this area. New uses of the land around the former Mansfield Training School are apt to further increase traffic and to create pressure to widen and straighten Rt. 44 through Mansfield Depot. As traffic congestion increases, Depot Rd. will be more heavily used as an alternative route to the University.

8. MANSFIELD FOUR CORNERS

Boundaries: This village area includes properties on both sides of Old Turnpike Rd., both sides of Rt. 44 from Old Turnpike Rd. on the east to existing commercial uses at the junction of Rt. 195. This district also includes properties along the westerly side of Rt. 195 from the Slafter/Ash house (1551 Storrs Rd.) on the south to the gas station at the corner of Rt. 44.

Description: Although there are few historic structures left at the junction of Rtes. 195 and 44, this "village" used to be an important road connection that included a toll house and a traveler's rest-stop (the Fuller Tavern, built in the early 19th century), and a general store (the Lyons store). Route 44 existed long before Nov. 9, 1789, when George Washington traveled along it and mentioned it in his diary. Shortly thereafter, in 1797, the Connecticut General Assembly established it as part of the Boston Turnpike Company, at which time it was "improved" and tolls were collected.

Four Corners was primarily a farming community, although a few small industries, such as a comb factory and a blacksmith shop, were said to have existed there. Another blacksmith shop and a large, important sawmill were located at the eastern end of Old Turnpike Road where it crossed the Fenton River.

Current status: Along Rte. 195 south, Rte. 44 east and Old Turnpike Rd., many 18th and 19th century homes still exist, including that of E. O. Smith. However, along the northern and western extensions of Routes 195 and 44, all the historic structures are gone.

Threats: The homes along Rte. 195 south and Rte. 44 east are threatened by extremely heavy traffic flows and by being very close to the road; hence, road widening or realignment could be detrimental to the continued residential viability of these homes. However, the homes along Old Turnpike Rd. are not threatened by traffic because Rt. 44 bypasses this portion of the "village," and because Old Turnpike Rd. was one of the first in town to be designated as a "Scenic Road."

9. Location: **MANSFIELD HOLLOW**

Boundaries: The village is bounded by the Natchaug River to the south and the Mansfield Hollow Dam to the east. It extends along both sides of Mansfield Hollow Rd. to properties about 500 feet west of Mansfield Hollow Rd. Extension. This village area also includes most properties on Mansfield Hollow Rd. Extension.

Description: This area has been referred to as Mansfield Hollow, Swift's Hollow, or just "The Hollow," from its first settlement, in the 18th century. It has been characterized by a combination of farms and many small mills, often owned by the same families. Silk and other threads were produced here in the 19th century. The Kirby mill was constructed in 1882, first to produce thread, and, later, brass primers for British guns in World War I, after which the mill produced chains, screws, springs and finally eyeglasses and eyeglass cases, before it closed, about 1950. It was sold to the University of Connecticut in the 1960's.

Current Status: Construction of the Mansfield Hollow Dam has isolated this village from through traffic, but has attracted recreational traffic. Since most of the land in this village was developed in the 18th and 19th centuries, there is little development pressure. The village has much the same appearance it must have had at the turn of this century. The Kirby Mill building continues to stand, but is not currently in use. Mansfield Hollow is a Town and Federally-designated Historic District.

Threats: Uses which would be incompatible with the residential nature of the village would threaten its character. Potential threats to the village and the Kirby Mill include an inappropriately designed hydroelectric facility associated with the Mansfield Hollow Dam and extensive recreational uses on the adjacent Federal land associated with the Mansfield Hollow Dam.

10. Location: **MERROW**

Boundaries: The remaining village structures can be found along Merrow Rd., between Rt. 32 and the Willimantic River. The original village also extended along Rt. 32 north of Merrow Rd. for about one-half mile.

Description: Throughout the 19th century, Merrow was a mill village, producing gunpowder, knitted stockings, undergarments and lumber. The village was served by ample waterpower and by the railroad, which installed a siding at the sawmill (now the site of mobile home park.)

Current Status: Most of the buildings and homes shown on an 1869 map of the Town still remain, although many now are used for multiple-residence dwellings. No mill activities or public structures remain.

Threats: Currently, there appear to be no major threats to what remains of the village of Merrow.

11. Location: **MOUNT HOPE**

Boundaries: This village area includes properties on both sides of Warrenville, River and Mt. Hope Roads. The district extends along Warrenville Rd. about 500 feet south of Mt. Hope Rd. and about 2,000 feet north of Mt. Hope Rd. It extends along Mt. Hope Rd. about 1,500 feet east of Warrenville Rd. and includes most properties along River Rd.

Description: In the 18th century, this village was called "Swift Town," after the Swift family, who ran a sawmill on the river. Later, a shingle mill, an axe-helve factory, a bone mill, a sumac factory and a gristmill were added. The Swift home, #84 Mt. Hope Rd., now known as the Minor-Grant house and built in 1733, is one of the oldest houses in town. The village had its own school and post office.

Current Status: The village today is primarily residential. Many of the 18th and 19th century homes remain. The mills are gone, except for two foundations and sluiceways. The post office, school and store have been converted to residences.

Threats: Homes along Rt. 89 have small frontyard setbacks. The integrity of this part of the village could be destroyed if this road is straightened or widened.

12. Location: **SPRING HILL**

Boundaries: This village area includes most properties on both sides of Storrs Rd. from the foot of Spring Hill (about 1,200 feet south of Ledgewood Drive) north to the former Prince Freeman House, about 300 feet south of Flaherty Rd.

Description: The first settlement on Spring Hill consisted of four large 18th century farms. The delineation of the village did not occur until the 19th century, when more than one-half of the existing older structures were built. A blacksmith shop, country store, school, church and post office all once were a part of this hilltop village. Spring Hill was the seat of Mansfield's government for 128 years. Its historic 1843 Town House is Mansfield's oldest public building still standing.

Current Status: Many of the historic homes, the church and the Town House still stand. Most of the commercial structures have been converted to residential use. The historic Altnaveigh Inn and several professional offices harmoniously coexist with the residential buildings in the village. Unlike many other Town villages, Spring Hill contains many active farms (University owned), which reflects the 19th century balance of land use in Mansfield. Part of Spring Hill is in a Town and Federally-designated Historic District.

Threats: Spring Hill suffers from extremely heavy traffic flow. Some houses are extremely close to the road. Widening or realignment of Storrs Rd. could be detrimental to the integrity of the village and, possibly, to the continued residential viability of homes along it.

13. Location: **WORMWOOD HILL**

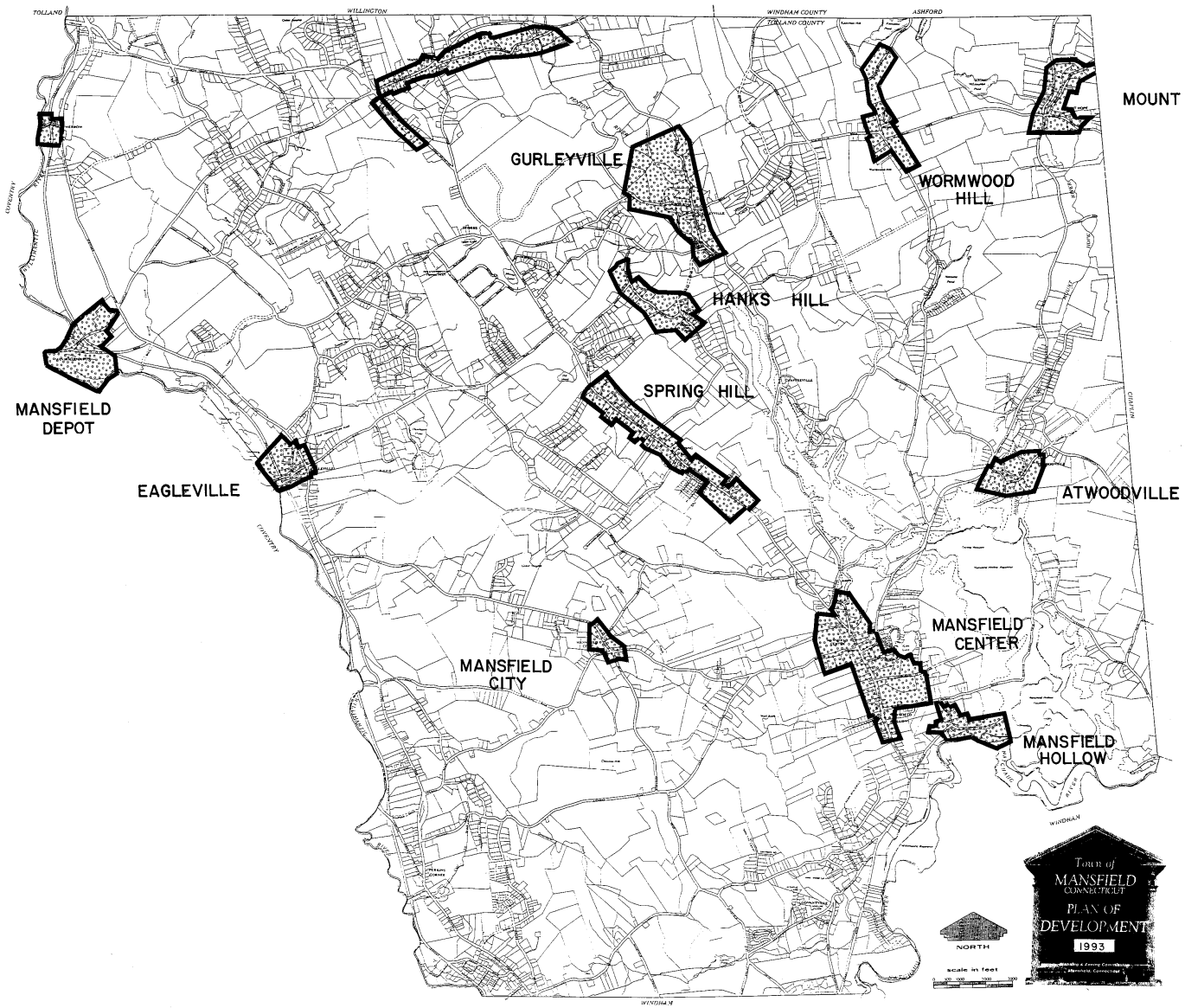
Boundaries: This district includes properties on both sides of Wormwood Hill Rd. It extends south of Mt. Hope Rd. just beyond the old Wormwood Hill School building and northerly to include the McDaniels farm at the junction of Knowlton Hill Rd.
Description: This village never had an industrial base. It gained its name from the many mulberry trees grown here in the 19th century. The leaves from these trees were fed to silk worms, which were kept in the private homes in this village. In early Town records, this area was known as Spring Hill.

Current Status: All of the homes on the 1869 map remain, although some have had exterior changes. The schoolhouse, built in 1796, remains, although it now is used as a private residence. A small village green remains at the junction of Wormwood Hill Rd. and Gurleyville Rd. At the northern end of the green is the site of the first Methodist church in Connecticut (later also used as a Mormon church). This building now is gone.

Threats:

1. The atmosphere of this village is intertwined with a rural character - open fields and farms. Development of the surrounding area or of open space within the village will change its nature and possibly alter its integrity.
2. Increased traffic along Mt. Hope and Gurleyville Roads could lead to calls to realign their intersection with Wormwood Hill Rd. Such a move could have a detrimental impact on this village and on its green.

MANSFIELD
FOUR CORNERS



HISTORIC VILLAGES

E. Goals and Objectives Regarding Historic and Archaeological Resources

The following goals and objectives provide guidelines for policy decisions and for the regulation of future development with respect to the preservation and protection of Mansfield's historic and archaeological resources. Implementation of these goals and objectives must take into account current information, legal considerations and experiences in other communities.

1. To regulate all land use activities with respect to potential impacts on historic structures, historic and archaeological sites, cemeteries, historic districts and other identified historic or archaeologically significant resources. All land use applications should be required to include detailed information on historic or archaeological resources on a subject site or within the neighborhood of a proposed development. Dependent on the nature of a land use proposal and potentially affected historic or archaeological resources, a professionally prepared Historical or Archaeological Assessment Report, including a traffic impact component, should be an application submission requirement. Approval criteria should be designed to ensure the preservation and protection of all significant historic and archaeological resources and should include specific standards to ensure compatible architectural designs and appropriate buffering and landscape improvements. Design standards also should take into account potential impacts on housing and site development costs.

2. To establish new zoning designations for the Town's remaining thirteen historic village areas with specific permitted use provisions, application requirements and approval criteria designed to preserve historic resources and enhance village character. Design standards should be enacted that help ensure architectural harmony with respect to size, scale, set-backs and overall appearance. Provisions should be incorporated that retain farmland and scenic views, protect mill sites, greens, stone walls, trees, historic fences and other open space features. Additions should be encouraged or required to be located behind existing structures. To promote enforceability, as well as community acceptance, design standards for historic village areas must be clear and simple, specific and sensitive to potential implementation costs that could affect the affordability of properties within a village area and discourage the rehabilitation of older structures. Vague and arbitrary standards must be avoided and, wherever possible, design criteria and standards should be illustrated.

3. Traffic impacts represent a significant threat to most villages, particularly Eagleville, Gurleyville, Mansfield Center, Mansfield Depot, Mansfield Four Corners and Spring Hill. To help address this concern, all road widening and alteration plans, including State and local projects and potential alterations associated with proposed developments, should be reviewed with respect to potential impacts on identified village areas and with respect to historic resources throughout the Town. Furthermore, all road alteration projects should be required to consider alternatives, including bypass roads around historic village areas, such as Eagleville, and other measures, such as public transportation improvements, that will reduce village impacts. Town officials also should consider the establishment of a specialized fund to help finance village improvements, including expansions of village greens, landscaping improvements, possible road

bypasses and bus stops for public transportation.

4. To promote the expansion of existing local and Federal Historic Districts in Mansfield Hollow, Mansfield Center and Spring Hill to coincide more closely with the village boundaries defined in this Plan, and to promote the creation of new local and Federal Historic Districts for Atwoodville, Eagleville, Gurleyville (already a Federal District), Hanks Hill, Mansfield City, Mansfield Depot, Mansfield Four Corners, Mount Hope and Wormwood Hill.

5. To encourage the permanent preservation, maintenance and appropriate use of significant historic structures and sites and significant archaeological sites throughout Mansfield. Of particular concern is the preservation and appropriate use of the Kirby Mill in Mansfield Hollow. In addition, land use policies should encourage the permanent preservation of watercourses, sluiceways, mill and house foundations, farmland, village greens and other open space features within identified village cores and at the periphery of village areas. These features are intricately connected with the character of Mansfield's historic village areas.

6. To encourage the adoption of a municipal ordinance that requires advance notice before an historic structure may be demolished or moved.

7. To place and maintain "Historic Village" markers in all of Mansfield's historic village areas. Existing Town Meeting notice signs should be preserved in Gurleyville, Mansfield Center, Mansfield City, Spring Hill and Wormwood Hill.

V, Natural Resources

A. General

Mansfield's character is associated closely with its clean water and air, its scenic ridges and rolling hills of forest, grassland, farmland and meandering streams, and its native animal and plant ecosystems. To retain the community's rural quality, it is essential that the Town's environmental features be protected and that natural resource information be evaluated carefully in reviewing all proposed development projects. Through the concerted efforts of local officials and the cooperation of responsible developers, new projects can be designed and constructed to complement Mansfield's physical environment and preserve the natural resource benefits enjoyed for centuries.

Within this Plan of Development, information is provided on the Town's topography, soils, subsurface geology, wetlands and watercourses, flood plains, aquifers, reservoir and agricultural resources. This chapter is designed to document our Town's natural resources and to establish goals and objectives for protecting Mansfield's natural resources. The open space chapter of this Plan more specifically addresses open space priorities and includes supplemental recommendations for preserving Mansfield's natural resource attributes. It is important to note that natural resource information also is available from numerous State and Federal agencies, including the State Department of Environmental Protection, the University of Connecticut Cooperative Extension Service, the Tolland County Soil and Water Conservation District and the U.S. Geological Survey. State and Federal agencies, as well as many private land trusts and conservation organizations, can provide valuable information for consideration in promulgating local land use regulations and in reviewing development proposals.

B. Topography/Slope

Mansfield's 28,352 acres of land vary in elevation from 160 feet above sea level on the Natchaug River at the Windham town line, to 733 feet north of Storrs. Mansfield is characterized by rolling land with relatively few areas of severe slopes. Those areas with severe slopes generally are found near one of the Town's three principle water courses, the Willimantic, Fenton and Mount Hope Rivers, or one of their tributaries. The attached topography map and slope map are reproduced from the 1971 Plan of Development and are based on U.S. Geological Survey information (see Maps 8 and 9).

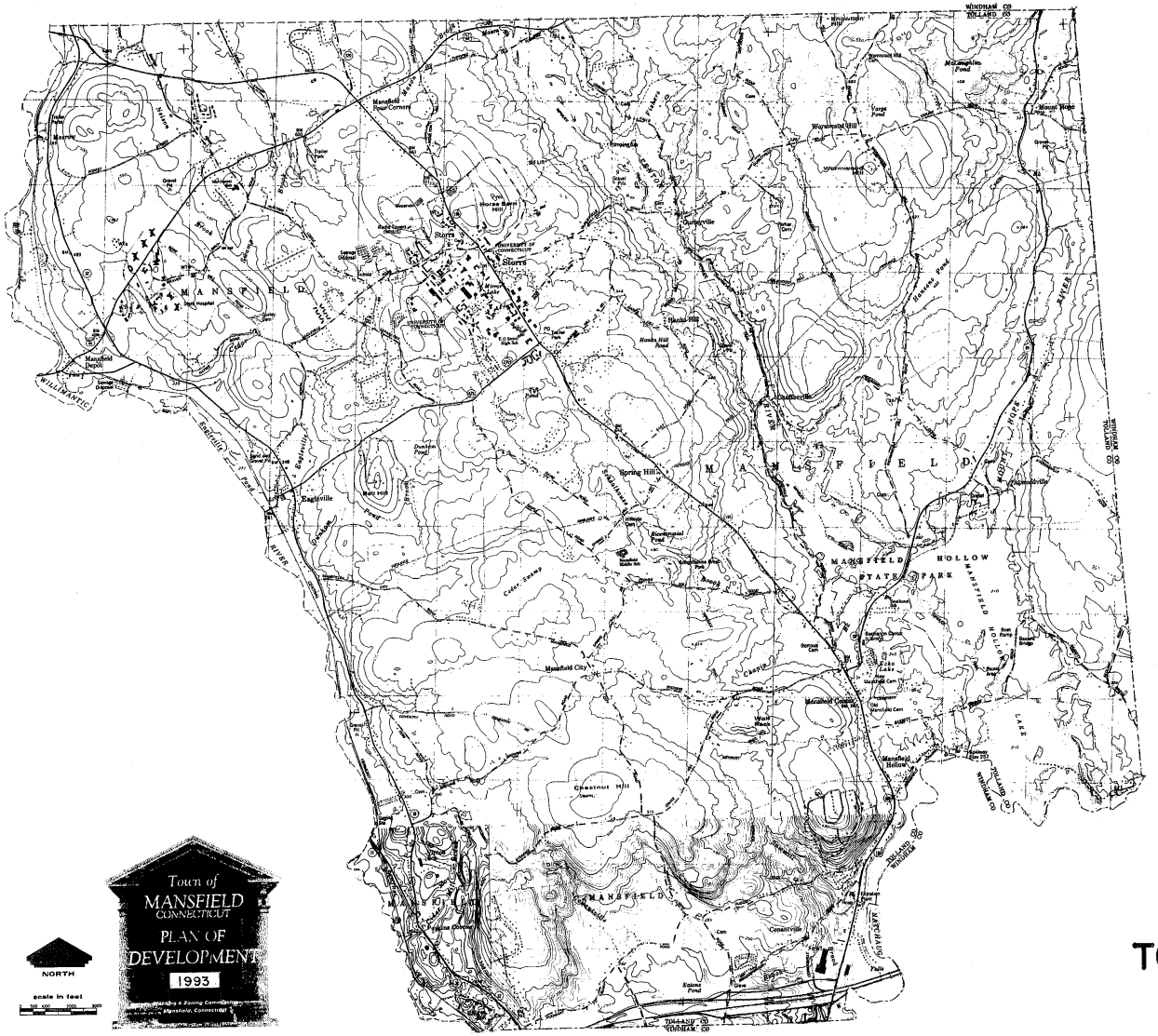
The topography or slope of a parcel of land is a major consideration in determining the site's suitability for environmentally compatible development. In reviewing a site's topography, the percentage of slope is the number of feet of vertical rise in a horizontal distance of 100 feet. The following guidelines have been established by the Planning and Zoning Commission for evaluating land use regulations and land use proposals with respect to slope characteristics:

1) **Land with Slopes of Less than 10 Percent** - The area shown without pattern on the slope map has slopes below 10 percent. This land is generally acceptable for all types of development and agricultural uses, provided soils are suitable.

2) **Land with Slopes Between 10 and 15 Percent** - This land is often located on the lower portions of hillsides and, due to potential drainage, erosion and site restoration problems, this land is suitable only for lower-density residential development.

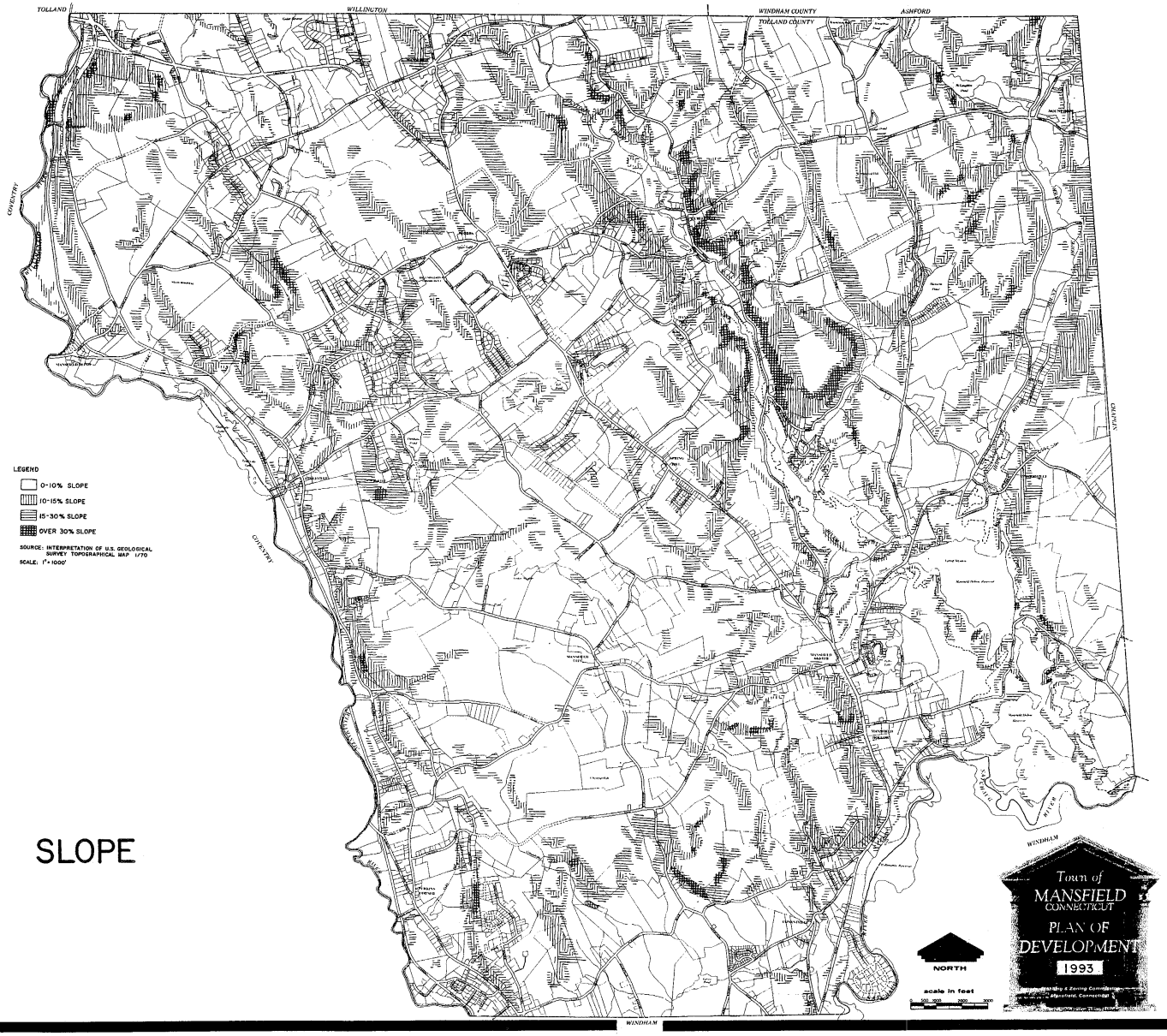
3) **Land with Slopes Between 15 and 30 Percent** - Development of land in this category should be discouraged, due to potential environmental problems. The preservation of these slopes is considered important for the maintenance of quality natural resource systems and the preservation of Mansfield's rural qualities.

4) **Land with Slopes Greater than 30 Percent** - This land is not considered buildable. Extreme slopes and topsoil problems combine to create unsolvable building, sewage disposal and drainage problems.



TOPOGRAPHY

MAP 8


TOLLAND
WILLINGTON
WINDHAM COUNTY
TOLLAND COUNTY
ASHFORD
COVENTRY
MANSFIELD
WINDHAM
LEGEND
0-10% SLOPE
10-15% SLOPE
15-30% SLOPE
OVER 30% SLOPE
SOURCE: INTERPRETATION OF U.S. GEOLOGICAL SURVEY TOPOGRAPHICAL MAP 1/70
SCALE: 1" = 1000'
NORTH
scale in feet
Town of
MANSFIELD
CONNECTICUT
PLAN OF
DEVELOPMENT
1993

SLOPE

MAP 9

C. Soils/Subsurface Geology

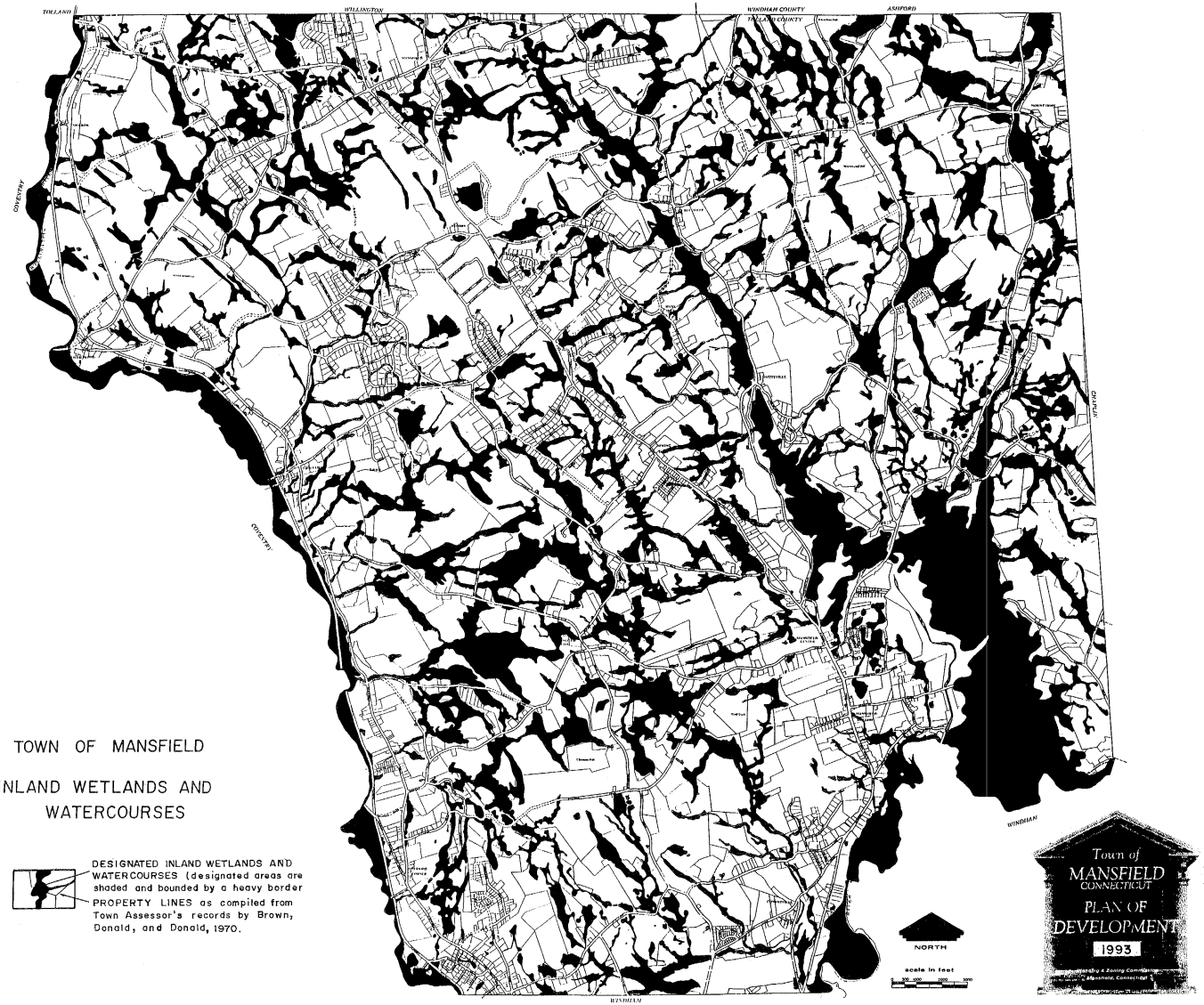
The nature of the soils and subsurface geology on a particular site are critical elements in determining the development potential of a property. This is particularly true in Mansfield where most areas of Town are not served by public water and sewer systems and, therefore, rely on individual wells and septic systems. For use as generalized guides, the Tolland County Soil and Water Conservation District Soil Survey for Mansfield and subsurface geology maps available from the State Dep't. of Environmental Protection Natural Resources Center, provide information on the soils and subsurface geology throughout Mansfield. The soil survey and geologic mapping provide valuable initial information regarding a particular area of Town, but this information is not sufficient for planning specific land use proposals. Onsite testing, through deep test pits and borings, is necessary to produce accurate information on soils, subsurface geology and ground water levels. This site-specific information is considered necessary to formulate development proposals within Mansfield.

Although soil and subsurface geologic information has been considered in formulating this Plan of Development, soil and geology maps have not been reproduced in this Plan, due to size and scale problems and the potential for mapping inaccuracies which can lead to misunderstandings. This Plan emphasizes the importance of generating specific onsite soil and geologic information for making land use decisions.

D. Wetlands and Watercourses

Mansfield's Inland Wetland and Watercourse Map (Map #10) clearly depicts the extensive nature of the Town's wetland and watercourse systems. Protection of these wetlands and watercourses is a high priority of this Plan of Development. Wetlands and watercourses convey surface drainage and help prevent flood damages by providing flood storage capacity. They also support desirable biological life, protect wildlife and fish habitats, trap sediments, retain nutrients and help protect ground water quality. Additionally, these areas provide educational, scientific and recreational benefits and add to Mansfield's visual and aesthetic character. Of importance, many significant archaeological sites, including dams, mills and Native American camp sites, are located along watercourses and waterbodies. Wetland and watercourse systems provide the foundation for the streambelt preservation objectives of the Open Space chapter of this Plan of Development.

Through the provisions of Sections 22a-36 to 22a-45 inclusive of the Connecticut General Statutes and through the adoption of local regulations, the Mansfield Inland Wetland Agency currently regulates land use activities in a wetland or watercourse or within 150 feet of a wetland or watercourse. This Plan strongly supports a continuation of this policy and, within legal constraints, the strengthening of the application review and post-approval monitoring process to ensure that the quality of Mansfield's wetland and watercourse systems are maintained.



TOWN OF MANSFIELD

INLAND WETLANDS AND WATERCOURSES

DESIGNATED INLAND WETLANDS AND WATERCOURSES (designated areas are shaded and bounded by a heavy border

PROPERTY LINES as compiled from Town Assessor's records by Brown, Donald, and Donald, 1970.

MAP 10

E. Flood Hazard Areas

Since 1974, Mansfield has been an active participant in the National Flood Insurance Program. Prior to this date, Mansfield had adopted zoning regulations to prevent new development in areas subject to flooding. In 1980, the United States Geological Survey completed a Flood Study for Mansfield and prepared Flood Hazard Area Maps (effective 1-2-81) for the Town. Engineering cross-sections with precise flood elevation data were prepared for the Natchaug, Willimantic and Mount Hope Rivers and a portion of Conantville Brook. Flood hazard areas, using approximate methods for delineation, were designated along the Fenton River and along Cedar Swamp, Eagleville, Fishers, Nelsons and Sawmill brooks. Additional areas along smaller watercourses and wetlands also are subject to flooding, but are not depicted on the Town's Flood Insurance Program flood mapping. All designated flood hazard areas have been classified as flood hazard zones on Mansfield's Zoning Map and are within open space preservation areas as depicted in this Plan of Development. Mansfield's Planning and Zoning Commission has adopted, and, as necessary, revised, zoning and subdivision regulations to remain an active participant in the National Flood Insurance Program.

It is Mansfield's land use policy that, to ensure the health and safety of Mansfield residents and to help prevent flood-related losses to life or property, no development should take place within areas subject to flooding. As a noted exception to this policy, it is recognized that a limited number of uses may be appropriate, provided a comprehensive special permit review determines that new structures would be floodproofed to withstand a 100-year storm, that no detrimental upstream or downstream flood impacts would arise, and that all other special permit criteria have been met. Buildings and uses that may be authorized should be limited to low-intensity agricultural and horticultural uses, recreational uses, hydropower facilities, parking areas, sand and gravel operations and buildings and uses accessory to existing uses. In reviewing any recreational or hydropower facility, consideration also must be given to traffic, noise and other potential neighborhood or environmental impacts. Except for authorized hydropower facilities, under no circumstances should any new structures or fill be placed within "floodways." Floodways are defined by the National Flood Insurance program as "the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood elevation without cumulatively increasing the water surface elevation more than one foot."

F. Ground Water Quality/Aquifer Areas

1. General

Mansfield's quality of life is associated directly with the quality of drinking water available in Town. A major underlying goal of this Plan of Development is the protection of Mansfield's surface and ground water quality. This section addresses ground water resources, and the next section of this Plan provides information on the Willimantic Reservoir and the portion of its watershed within Mansfield.

A majority of Mansfield residents obtain their drinking water from the ground. Well fields along the Willimantic River (north of Route 44 and west of Route 32) and along the Fenton River (north of Gurleyville Rd.) supply potable water to the University of Connecticut and a number private residences near the UConn campus. The Mansfield Training School area also is served by the State's Willimantic River well fields. Except for some southern portions of Town that are supplied water from the Willimantic Reservoir, all other Mansfield residents obtain their potable water through smaller wells. Drinking water is derived from both bedrock and glacial deposits (till or stratified drift) atop the bedrock. Although all of these sources function as aquifers, stratified drift deposits, which are typically located along river valleys, and the adjacent hillsides are usually referred to as a Town's aquifer areas. This reference is due to the fact that stratified drift deposits, especially where thick and coarse-grained, yield substantial amounts of water and are, therefore, classified as a relatively high-yield aquifer. Although it is recognized that there are other types of aquifers, for the purposes of this Plan of Development, aquifers are defined as areas of stratified drift deposits and the adjacent hillsides.

Mansfield's Planning and Zoning Commission has long recognized the importance of protecting ground water quality and the Town's stratified drift aquifer areas. Information on Mansfield's aquifer areas was received in 1967 through the publication and distribution of "Water Resources Inventory of Conn. part 2, Shetucket River Basin" and the companion volume on hydrogeologic data. In the late 1970's, Mansfield officials participated in a Statewide effort to encourage the establishment or refinement of regulatory standards designed to protect ground water resources. In 1979, this effort resulted in a Connecticut Areawide Waste Treatment Management Planning Board report published for Mansfield and a map of "Ground Water Recharge Areas" in Mansfield. This map, which depicts Mansfield's aquifer areas using the terms "primary" and "secondary recharge areas," has served as the map guide for regulating aquifers since 1982. In the last decade, the Mansfield Planning and Zoning Commission has revised approval criteria for site plan and special permit applications to emphasize ground water protection and has incorporated and, subsequently, strengthened specific performance standards for all activities within the Town's aquifer areas. In 1991, the Mansfield Planning and Zoning Commission was designated as the Town's Aquifer Protection Agency. Working with State officials, Mansfield is committed to reviewing existing regulatory provisions with respect to potential problem uses in aquifer areas and application submission and approval requirements for all uses proposed within aquifer areas.

Map #11, which was prepared based on information compiled by a geologist member of the Mansfield 2002 Water Resources Subcommittee, depicts the important aquifer areas in Mansfield. This map was prepared based on current State and local information including Thomas, M.P., et al., 1967 Conn. Water Resources Bulletin #11, U.S. Geological Survey-Plate B; Vitali, R., Conn. Dep't. of Transportation, Construction Aggregate availability study summary Report, Highway District II; a 1979 mapping of ground water recharge areas, previously referenced; current Connecticut Dep't. of Environmental Protection surficial geology maps and preliminary level A mapping of the UConn wellfield along the Willimantic River as provided by D.E.P.'s Natural Resource Center. It is recognized that the precise boundaries and character of aquifer areas cannot be defined without site-specific borings and a hydrogeologic study, but the attached map is considered suitable for regulating aquifer areas in Town. This map delineates three significant accumulations of stratified drift which could be significant sources of potable water. These three areas are located along the Willimantic River Valley, along the Fenton, Mount Hope and Natchaug River Valleys and in the Pleasant Valley Road area. Information on each of these areas, based upon the 2002 Water Resources Subcommittee report, follows:

a. Willimantic River Valley aquifer: Stratified drift occurs along the valley of the Willimantic River at the west side of Mansfield. A lengthy zone of saturated thickness over 80 ft. occurs at the southern end in the middle or western (Coventry) side of the valley (plate B of the 1967 U.S. Geol. Survey report). Substantial water is available in that area and also along the northern part of the valley (Plate D of the 1967 U.S. Geol. Survey report). In fact, well fields for the Univ. of Conn. (with a back-up system in the Fenton Rivery valley) and the Mansfield Training School property exist in the northern tract. Thus, this aquifer now serves a significant population, aside from possible future exploitation. Some considerations pertinent to this aquifer are the following: (1) The aquifer occurs along the Mansfield/Coventry border. Avoidance of contamination requires the cooperation of Coventry, thus suggesting a regional approach to protection of this aquifer. (2) Sewage disposal and septage disposal facilities are present in the valley. (3) The Perkins Corner area has been designated for commercial development. Sewer lines do not exist there. (4) A railroad line winds along the valley and there may be a potential for pollution from materials transported by the railroad.

b. Fenton/Mt. Hope/Natchaug aquifer: Tracts of stratified drift occur along the Fenton and Mt. Hope River valleys and converge at the Mansfield Hollow Lake area. The deposits are especially thick (over 80 ft. of saturated thickness) north and south of Echo Lake, Mansfield Center, and on the east side of the Willimantic Reservoir southward (Plate B of the 1967 U.S. Geological Survey Report).

This aquifer merits concern for the following reasons: (1) The aquifer is largely situated within Mansfield, so the surroundings are readily subject to Town control; (2) Because the drainage ultimately leads to the Willimantic Reservoir, the region already receives attention towards protection from contamination; (3) The U.S. Geol. Survey report cited above, Plate D, indicates several parts of this aquifer which "are especially favorable for the sustained development of large ground water supplies..." Those zones are: along the Fenton River; along the Mt. Hope River; at the confluence of the Fenton and Mt. Hope Rivers (northern part of Mansfield Hollow Lake); and south of the

Willimantic Reservoir; (4) The ground water is of relatively good quality: GAA or GB/GAA by State coding (see the 1987 Conn. DEP map, *Water Quality Classification Map of Conn.).*

c. Pleasant Valley aquifer (south-central Mansfield, adjacent to Willimantic: Underlying this area is a body of stratified drift that connects with the Natchaug River valley to the east). According to Plate B of the 1967 U.S. Geol. Survey report, the stratified drift west of Mansfield City Rd. is thick--over 80 ft. saturated thickness. Plate D of the same report, however, does not single out the area as a prime source of ground water.

Much of the land presently is in agricultural use (corn fields). However, the tract bounded by Mansfield Ave., Pleasant Valley Rd. and Mansfield City Rd. is zoned for industrial park use and has access to public water and sewer services.

2. Goals/Objectives Regarding Ground Water Protection

The following goals and objectives have been established to help protect ground water quality in Mansfield:

a) Mansfield's Zoning Regulations should be reviewed and, where appropriate, revised with respect to "high risk" uses in aquifer areas as defined by the State Dep't. of Environmental Protection and other publications. Problematic commercial and industrial uses and sand and gravel removal or processing uses should be prohibited or very strictly regulated within aquifer areas which are favorable for the sustained development of large ground water supplies. Application submission requirements, approval criteria and performance standards for all uses should be refined to emphasize the importance of ground water protection. Revised zoning regulations also should consider information contained or referenced in a February 5, 1991 draft Aquifer Protection Bylaw section to protect aquifers from contamination by commercial development, as prepared by SEA Consultants, Inc.

b) Except as noted below, areas underlain by stratified drift deposits and adjacent hillside recharge areas should be zoned for low density residential uses. A maximum density of one dwelling unit per two acres of land should be considered, particularly within the Fenton/Mt. Hope/Natchaug aquifer and in the aquifers associated with University of Connecticut well fields along the Willimantic and Fenton Rivers. This density is recommended for water supply aquifers in a 1992-97 Conservation and Development Policies Plan for Connecticut. As noted exceptions, areas served by public sewer and water systems, such as the Pleasant Valley aquifer area and the Mansfield Training School area, may be considered for more intensive uses. In addition, designated areas along Route 32 near the intersections of Routes 31 and 195 are considered appropriate for low-risk commercial uses.

c) The acquisition of land or development rights within primary recharge areas of the Fenton/Mt. Hope/Natchaug aquifer, particularly the potentially highest yielding tracts, is considered a high open space priority.

d) "High risk" uses within or adjacent to aquifer areas should be monitored periodically to address potential ground water contamination. High risk uses include, but are not limited to: the Mansfield transfer station/bulky waste landfill on Rt. 89, the abandoned Town landfill on Cemetery Rd., the Mansfield Training School sewage treatment facility on Plains Rd., the University of Connecticut sewage treatment facility on N. Eagleville Rd., septage lagoons off Route 32 south of Coventry Rd., a septage lagoon off Rt. 32 south of Cider Mill Rd., underground fuel storage tanks, existing or approved commercial and industrial uses, agricultural uses, particularly those involving fertilizers and pesticides, and sand and gravel removal or processing uses.

e) The Town's ground water recharge area mapping used for implementing zoning standards for aquifer protection should be updated to incorporate topographic data and the most recent aquifer information, as compiled by the State Dep't. of Environmental Protection and the Town's 2002 Strategic Planning Committee.

f) It is recognized that sand and gravel supplies are an important resource for construction applications and that future sources are necessary. It also is recognized that the largest useable deposits of sand and gravel are located in major river valleys which have been identified as important aquifer areas. Due to stratified drift being both a prime aquifer material and a prime source of sand and gravel, care must be taken to insure that important aquifers are not jeopardized by sand and gravel removal activities. To help protect Mansfield's aquifer resources, it is essential that current special permit requirements for establishing sand and gravel removal operations be retained and appropriately revised. A burden should be placed on an applicant to provide necessary information to demonstrate that ground water contamination will be prevented and that the quality and quantity of aquifer resources will not be affected. Any excavated area should be returned to a stable, natural condition that would enable uses permitted in that zone without the addition of fill materials. In addition, a sand and gravel removal applicant should be required through bonding provisions to remedy any situation that arises which threatens an aquifer. The following exemplify the types of questions that should be satisfactorily addressed by any application to excavate sand or gravel in Mansfield.

- What is the grain-size distribution at the site under consideration--i.e., mostly gravel, mostly sand, or a portion of each? The nature of the material will influence how much is apt to be used, as well as the permeability (exact rate of water movement).

- What are the dimensions, laterally and vertically, of the proposed operation?

- How far below the surface and the possible bottom of the excavation is the water table? The potential for contamination increases as the excavation nears the water table.

- What is the depth to bedrock at the site?

- What is the direction of ground water flow at the site? If contaminants

enter the ground water, in which direction will they travel? Are there pollutants?

- Will the excavation intersect the water table? What will be the impact on ground water and any adjacent inland wetland or watercourse areas?

- What is the potential for contaminants (e.g., oil or gasoline) to enter the ground and reach the water table from vehicles and machinery involved in the removal?

- What is the plan to reclaim the site once the sand and gravel removal is finished? What materials, trees, stumps or other fill materials will be buried in excavated areas? Will fertilizers, manures, etc., be used in an attempt to redevelop a vegetative cover? (Fertilizer or related material can seep into the ground with rainfall and cause a contamination problem.)

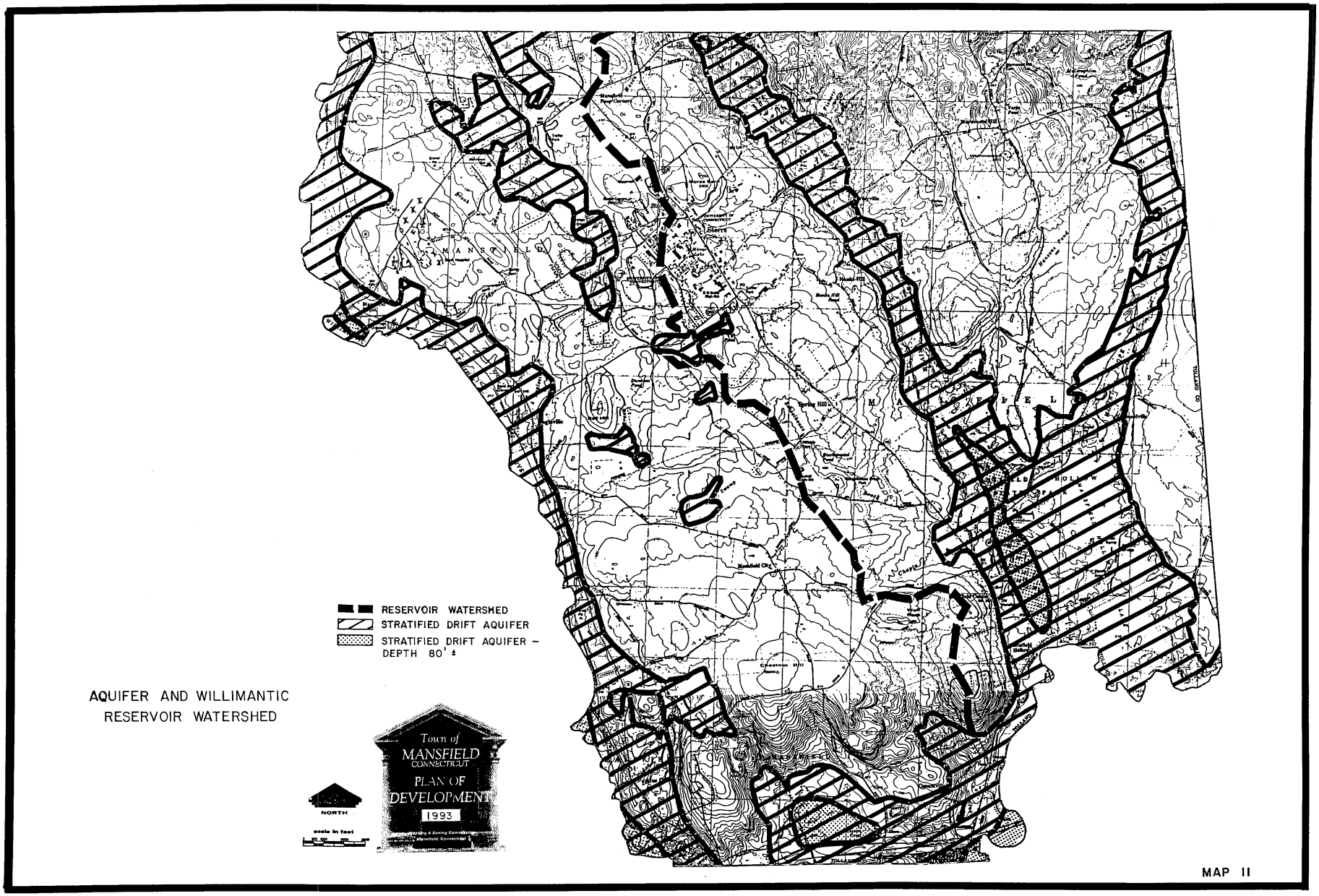
- To what uses can the land be put after excavation is completed?

g) Consideration should be given to delineating areas of Town where sand and gravel removal would pose the least threat to important aquifer areas. This mapping should encompass geohydrological factors, such as depth to ground water, thickness of stratified drift, etc., and other considerations pertinent to such operations. Upon completion of such mapping, consideration should be given to restricting larger sand and gravel removal projects to those identified areas which pose the least risk to Mansfield's important aquifers.

G. Willimantic Reservoir Watershed

Approximately one-half of the Town of Mansfield is situated within the watershed boundaries of the Willimantic Reservoir. The reservoir is the source of potable water for approximately 25,000 persons in Windham and southern Mansfield. The reservoir has a large watershed with unused service capacity and water service could be extended to many additional users in the future. Map #11 depicts portions of Mansfield that are within the drainage basin of the Willimantic Reservoir. Most of the watershed within Mansfield is zoned RAR-90, but significant areas, including those closest to the reservoir, are zoned RAR-40, and a section in Mansfield Center is zoned Neighborhood Business.

In reviewing zoning policies for the Willimantic Reservoir watershed area within Mansfield, the Planning and Zoning Commission has taken into consideration a March, 1989 watershed protection study prepared by the Windham Regional Planning Agency, a March, 1990 State Dep't. of Environmental Protection report entitled *Carrying Capacity of Public Water Supply Watersheds,* and recommendations contained in the *Conservation and Development Policies Plan for Connecticut 1992-97.* The Planning and Zoning Commission has determined that a high local and regional priority should be placed on protecting surface and ground water quality within the entire Willimantic River Watershed. Protection of the reservoir watershed will help ensure a good supply of potable water at low public cost for residents of Windham, Mansfield and, potentially, other towns in our region. It is, therefore, recommended that, except for areas served by public water and sewer systems or specifically designated as commercial areas, the entire Willimantic Reservoir watershed should be zoned for low-density residential uses at a maximum density of one dwelling unit per two acres of land. Additionally, all existing and proposed land uses, particularly commercial uses and those considered high risks by Dep't. of Environmental Protection and Windham Regional Planning Agency publications, should be strictly regulated and monitored, to help prevent pollution problems. Identified high risk uses include Mansfield's transfer station and former landfill off Route 89; and abandoned landfill off Cemetery Rd., Mansfield's salt storage operation off Clover Mill Rd. and existing or converted commercial sites. Related recommendations are contained in Chapter V, Section I., Natural Resource Goals and Objectives.



AQUIFER AND WILLIMANTIC RESERVOIR WATERSHED

MAP II

H. Agricultural Resources

The preservation of existing and potential farmland and forest land has increasingly become a conservation priority. Local farms, including tree farms, provide scenic character and specialized plant and wildlife habitats, produce high-quality products and help mitigate rising prices associated with transportation costs. Local farms contribute to Mansfield's social diversity and help preserve an important link to the Town's agricultural past. Although this agricultural preservation issue extends beyond municipal and State borders, since 1982, a number of open field areas previously used for farming purposes have been subdivided and developed within Mansfield. These areas have been permanently lost for larger scale agricultural uses. A continuation of this pattern would have a serious and increasingly detrimental effect on Mansfield's character.

The desired preservation of agricultural land is a complex and multi-faceted problem with no simple solutions. Acceptable approaches will require the concerted efforts of farmers, foresters, and all levels of government. The problem is complicated by the fact that many agricultural preservation programs, seek to obtain the desired public benefits associated with agricultural land uses without full consideration of resultant detriments imposed on individual farmers and property owners. Zoning densities of one dwelling unit per two acres of land has not proven to be an adequate measure of protection, and an approach using even lower densities, such as one dwelling unit per five or more acres, could face legal challenges under Connecticut's statutory framework. Nevertheless, all agricultural preservation options (including larger-lot zoning) based on existing land uses, soil types, other natural resource information and this Plan of Development, should be considered to protect Mansfield's existing and potential agricultural resources.

As an important initial action to help preserve Mansfield's existing and potential agricultural areas, most of the Town's larger existing and potential farmland areas have been identified and are depicted on Map #12. Although a few land use conflicts prevent inclusion of all identified farmland areas, a majority of the active farms and areas containing prime agricultural soils, as designated by the Tolland County Soil and Water Conservation District, are depicted as recommended agricultural preservation areas in this Plan of Development. Map #13 depicts, in a generalized manner, Mansfield's deciduous and coniferous forest land. This Forested Land Map was prepared by J. Stocker, of UConn's Dep't. of Natural Resources Management and Engineering, and is based on 1988 and 1990 satellite imagery. This map is provided to give an overview of Mansfield's forest land, but it should not be utilized for specific regulatory decisions without onsite verification. To further promote the protection of forest resources, this Plan endorses the preparation of a forest resources site index study with an associated mapping by soil types of important forest lands in Mansfield. Upon completion of this study, forest preservation areas should be incorporated into the Open Space Preservation chapter of this Plan of Development. The mapping of farmland and forestry resources will provide a basis for further action.

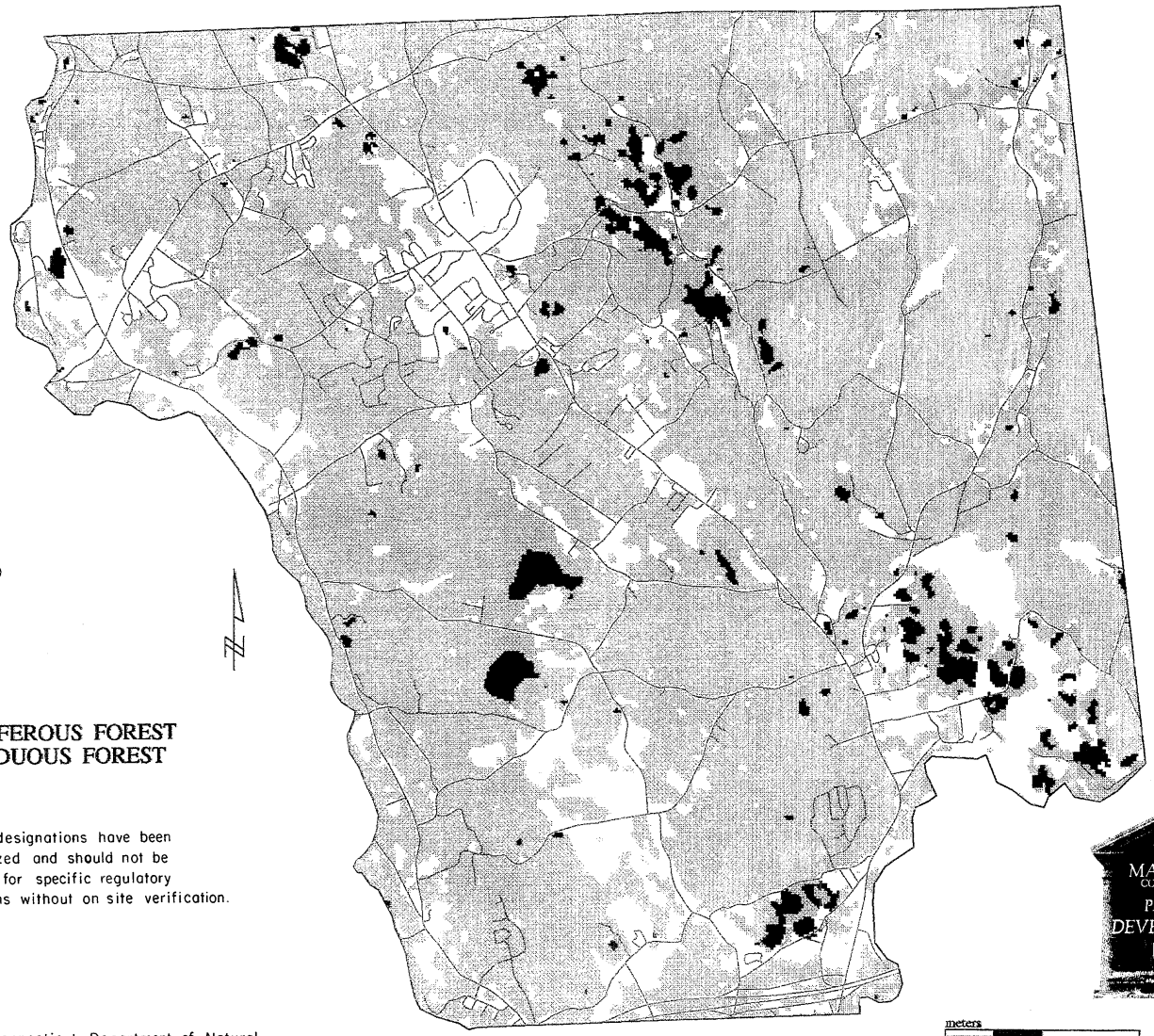
Programs involving the purchase or transfer of development rights and conservation easements, which restrict or discourage intensive non-agricultural uses, should be evaluated for local implementation. Additionally, municipal,

State and Federal investment and taxation policies should reevaluate all impacts on farmers and foresters. Another approach which holds significant promise and could be implemented locally involves a specific cluster requirement for all residentially-zoned property containing existing agricultural uses or areas with prime agricultural soils. A carefully designed cluster regulation could allow the same number of dwelling units as a conventional development, but with the added bonus of the permanent preservation of a significant amount of existing or potential agricultural land.

All programs to help preserve agricultural land should be coordinated with existing farmers and foresters in Mansfield, as well as representatives of the Tolland County Soil and Water Conservation Service and the University of Connecticut College of Agriculture and Cooperative Extension Service. Town officials should also work with the State to encourage the retention of existing agricultural areas under State ownership. A local Farmland Protection Committee, as recommended in the 2002 Character and Resources Subcommittee report, would be an important step in promoting the preservation of agricultural uses in Mansfield. In addition, land use policies should encourage self-sustaining farms for individual property owners, part-time farmers and the utilization of roadside stands and pick-your-own operations to market agricultural products. With appropriate regulatory standards that consider both a farmer's needs and potential traffic, parking, environmental and neighborhood impact issues, agricultural uses, with an onsite marketing of products, can compatibly co-exist with neighboring residential uses. (Also see Chapter VI, Section F.5. of this Plan of Development.) All farmers and foresters should be encouraged to practice "best management practices" as recommended by State and Federal agencies, and to take appropriate actions to minimize risks of erosion and sedimentation. Through a coordinated effort of local citizens, farmers, foresters and government officials, our town's agricultural resources can be preserved without detrimentally affecting our citizen farmers.

AGRICULTURAL AREAS

MAP 12



FORESTED LAND

(BASED ON SATELLITE DERIVED LAND COVER DATA.)

Land Cover
- CONIFEROUS FOREST
- DECIDUOUS FOREST

NOTE: Forest designations have been generalized and should not be utilized for specific regulatory decisions without on site verification.

Town of MANSFIELD CONNECTICUT PLAN OF DEVELOPMENT 1993

meters
0 1000 2000

Map provided by: The University of Connecticut, Department of Natural Resources Management and Engineering, Laboratory for Earth Resource Information Systems (LERIS). J. Stocker 6/11/93.

MAP 13

I. Goals and Objectives Regarding the Protection of Mansfield's Natural Resources

This subsection summarizes goals and policy recommendations contained in subsections A through H and incorporates additional goals and objectives that are designed to protect Mansfield's natural resource attributes. These goals and objectives provide guidelines for policy decisions and for the regulation of future development. Implementation of these goals and objectives must take into account current information, legal considerations and experiences in other communities. More detail on a number of these goals and objectives can be found in subsections A through H of the Natural Resource section of this Plan.

1) To regulate all land use activities with respect to potential impacts on areas of steep slopes, inland wetlands and watercourses, flood hazard areas, ground water and aquifer areas, the Willimantic Reservoir, agricultural land and other components of Mansfield's physical environment. All land use applications should be required to provide detailed information, based upon onsite testing, regarding the natural resource characteristics of a proposed development site and neighboring areas that could be affected by the planned activity. Dependent on the nature of a land use proposal and potentially affected natural resources, professionally prepared environmental assessment reports, such as a hydrogeologic study, should be an application submission requirement. Approval criteria and zoning performance standards should be designed to ensure the preservation and protection of natural resources and should include specific regulations to ensure compatible development designs with appropriate buffering provisions. Depending on watershed characteristics, onsite detention of storm water should be encouraged, to minimize downstream flooding and recharge ground water onsite.

2) To protect natural resource features, a site's original physical capabilities should be the prime determinent in establishing residential densities in nonsewered areas. Land use regulations should discourage extensive site clearing and regrading, activities in and proximate to wetlands and watercourses and a use of septic systems requiring significant amounts of fill to meet State Health Code requirements. Within flood hazard areas, development should be prohibited to the degree legally possible under Connecticut laws. For conventional subdivision lots with individual onsite septic systems and wells, each lot should contain at least 30,000 square feet of usable land in a contiguous area which does not contain inland wetlands or watercourses, steep slopes or ledge at or near the surface of the ground.

3) Except for areas served by public sewer and water systems or specifically designated for commercial uses, areas underlain by stratified drift deposits and adjacent hillside recharge areas (aquifer areas) and areas located within the watershed of the Willimantic Reservoir should be zoned for low-density uses. A maximum density of one dwelling unit per two acres should be considered in these areas.

4) Mansfield's Zoning Regulations should be reviewed and, where appropriate, revised with respect to "high risk" uses in aquifer areas and within the watershed of the Willimantic Reservoir. Problematic uses that have a higher

potential for surface or ground water problems should be eliminated as permitted uses or more strictly regulated within the Town's aquifer and watershed areas.

5) Mansfield officials should supplement existing efforts with a more specific periodic monitoring program to address potential surface and ground water problems that could arise from existing high-risk land uses within aquifer and reservoir watershed areas. In addition, all approved development projects must be carefully monitored during construction to make sure approved plans, including erosion and sediment control provisions are followed. A developer-financed program for continued onsite testing of surface and ground water quality is considered an appropriate approval requirement for any high-risk land use which is authorized, particularly those within aquifer and reservoir watershed areas.

6) Protection for many of the Town's natural resource attributes may be attained through carefully designed regulation for cluster development in both sewered and nonsewered areas. Cluster development is currently defined in Section 8-2 of the State Statutes as "a building pattern concentrating units on a particular portion of a parcel so that at least one-third of the parcel remains as open space to be used exclusively for recreational, conservation, and agricultural purposes except that nothing herein shall prevent any municipality from requiring more than one-third open space in any particular cluster development."

A cluster development which is consistent with soil types, terrain and infrastructure capacity and has an overall density no greater than what would be allowed in a conventional development, has the potential for protecting significant areas of agricultural land and for retaining larger tracts of open space land. Provided sanitary issues are suitably addressed, a clustering requirement can help preserve stratified drift aquifer areas and streambelts along the Town's watercourses. A clustering regulation must be designed to permanently protect open space or agricultural areas, and must be carefully reviewed for legal suitability under Connecticut's statutory framework. The Town's acceptance of community septic systems and other onsite systems that safely process sanitary wastes or the expansion of public sewer systems, may help to promote the implementation of cluster development regulations. A clustering regulation could be implemented through the establishment of "overlay districts" for identified agricultural land, aquifer areas, and streambelt and watershed preservation areas.

7) All governmental, commercial, industrial and educational land uses, including the University of Connecticut, that transport, store, produce, utilize or dispose of hazardous materials, as defined by State and Federal agencies, should be strictly regulated and monitored to ensure compliance with approved plans and to help minimize environmental risks. Mansfield officials should educate citizens about the risks of household chemicals and should encourage the active use of a regional household chemical drop-off facility which is expected to be constructed in Coventry by 1994.

8) To help minimize air pollution problems, this Plan of Development is designed to encourage an energy-efficient land use pattern that promotes

pedestrian and bicycle traffic and public transportation opportunities. Regulatory standards should be reviewed to further promote energy-efficient designs for new structures and to require multi-family, commercial and industrial development plans to incorporate bus stops, bicycle racks, sidewalks and other amenities that will promote public transportation and pedestrian and bicycle traffic.

9) Mansfield officials are encouraged to utilize the information contained in this Plan of Development for making decisions regarding land acquisition and the purchase of development rights. The protection of Mansfield's aquifer areas, particularly the Fenton/Mt. Hope/Natchaug aquifer, farmlands and streambelts should be given high priority. Mansfield's Subdivision Regulations should be utilized to the extent legally possible to require identified natural resource features to be protected through dedication to the Town, the use of conservation easements, and other appropriate measures.

10) Mansfield officials are encouraged to adopt Town Ordinances that:

    a. require all onsite septic systems to be inspected every 3 to 5 years and pumped out, and

    b. strictly regulate all underground fuel storage tanks and require, based on age, type of construction, and risk, older tanks to be removed. Consideration should be given to prohibiting new underground tanks in aquifer areas and within the watershed of the Willimantic Reservoir.

11) Mansfield officials should establish an agricultural protection committee to work with local farmers, foresters and government officials to review all agricultural preservation options and develop and implement programs to help preserve Mansfield's existing and potential agricultural uses, including part-time farmers and the use of roadside stands and pick-your-own operations to market agricultural products. Such a committee could help encourage best management practices that eliminate the use of unnecessary or inappropriate fertilizers and pesticides, increase crop, dairy and woodland product yields and minimize erosion and sedimentation problems. Such a committee also could assist in minimizing potential neighborhood impact issues that can arise when residential uses are located in close proximity to agricultural uses. To minimize potential coordination problems, consideration should be given to including representatives from the Town's Conservation Commission and Open Space Preservation Committee on the agricultural protection committee.

12) Many of the natural resource objectives of this chapter can be addressed through the protection of identified streambelt corridors throughout the Town. This specific objective is discussed in more detail in the open space portion of this Plan of Development.

13) Due to potential conflicts between sand and gravel removal activities and identified aquifer areas, special permit requirements for proposed sand and gravel removal projects should be strengthened to require an applicant to provide comprehensive information to demonstrate that the quality and quantity of aquifer resources will not be affected. In addition, consideration should be given to delineating areas where sand and gravel

removal would pose the least threat to important aquifers. Upon completion of this delineation, consideration should be given to restricting larger sand and gravel applications to areas which pose the least threat to Mansfield's important aquifers. (For more details, see Chapter V, F, 2.f and g).

VI, Residential Land Use

A. General

In updating the residential component of the 1982 Plan of Development, the Town's existing development pattern has been reanalyzed with respect to the general policy goals of Section III of this Plan, Mansfield's natural resource characteristics, municipal supportive service capabilities, roadways and traffic patterns and land uses and development plans for neighboring municipalities. The location and nature of new development since 1982, State and regional land use plans and energy and economic factors associated with land use, also have been considered. The following noteworthy findings have influenced the residential goals and recommendations of this 1993 Plan of Development:

1) In the ten-year period from 1980 to 1990, building permits were issued for 816 new dwelling units (367 single-family, 32 two-family and 417 multi-family). Single-family units have been built in all areas of Town, but most larger subdivisions involving new roads have been within western portions of Town. Multi-family units built since 1980 have been concentrated in areas with sewer and water service in southern Mansfield and in areas adjacent to the University of Connecticut campus. To a significant degree, residential units built since 1980 have followed locational objectives of Mansfield's 1982 Plan of Development.

2) As emphasized in Section V of this Plan, as well as in previous Plans of Development, most areas of Mansfield do not contain physical resources supportive of high-density development. Of particular importance, since 1982, detailed information has been received from governmental and private sources regarding surface and ground water quality and the need to protect the Town's water resources. This new physical resource data reinforces the need to regulate and monitor carefully new residential development, especially in non-sewered areas and in aquifer and Willimantic Reservoir Watershed areas. Careful regulation is needed to protect existing and potential sources of potable water and to prevent health and safety problems for present and future Mansfield residents.

3) Due to Mansfield's physical characteristics and a desire to provide for a balance of housing opportunities in an energy-efficient pattern of development, higher residential densities must be oriented toward those areas served by public sewer and water systems. Areas in southern Mansfield between Rt. 195 and Mansfield City Rd. and south of Puddin Ln.; areas adjacent to the University of Connecticut campus; and areas within the service district of the Mansfield Training School sewer and water systems are most suitable for higher-density residential development. Significant expansions of these existing sewer and water service areas are not expected at this time.

4) In the late 1980's, the State of Connecticut decided to close the Mansfield Training School as a residential facility for mentally retarded persons. This closing, which is scheduled for 1992, was not anticipated in Mansfield's 1982 Plan of Development. Portions of the subject 1,000 +/-

acre property have been taken over by other State agencies, including the Dep't. of Corrections, for a 350-bed minimum security prison and the University of Connecticut for office, storage and assorted other uses. Uses for many of the existing buildings have not yet been determined. State officials, with municipal coordination, are in the process of developing a master plan for residential and related commercial development for vacant portions of Mansfield Training School property in the vicinity of the junction of Routes 32 and 44. This land can be served by sewer and water systems. A May, 1992 draft Master Plan indicates the potential for creating a new village area with a mix of higher-density market rate and affordable housing units. The draft Plan proposes a total of 375 housing units in three distinct phases which would be implemented over one or more decades. The creation of a higher-density, coordinated cluster housing development on State land formerly controlled by the Mansfield Training School would promote many of the goals and objectives of this Plan of Development.

5) Mansfield officials have long recognized a need to help provide a balance of housing opportunities. Through the combined efforts of Town Council-appointed housing Study Committees and numerous Town officials, many affordable housing units have been built in Mansfield. Zoning provisions for multi-family housing developments and efficiency unit apartments as part of a single-family residence, have supplemented the efforts of the Housing Authority and Town Council. However, during the middle 1980's, rapidly escalating land prices contributed to a scarcity of privately developed affordable units, particularly in detached single-family dwellings. Although the economic recession in the early 1990's appears to be altering the mix of new housing toward affordable units, this Plan of Development incorporates a number of suggestions of Mansfield's Housing Partnership Committee and considers the creation of affordable housing units a significant land use objective.

6) Although construction of an expressway between Windham and Bolton remains uncertain, completion of this highway would reduce commuting time between southern Mansfield and Manchester, East Hartford and Hartford. This could result in increased residential development in southern parts of town.

7) The University of Connecticut has not constructed any new dormitories since the early 1970's and deferred maintenance has resulted in poor conditions for many existing residence halls. This situation has contributed to an apparent increase in the number of unrelated individuals renting the housing units designed for single-family occupancy. In many cases, significant nuisance problems have resulted. To help protect the health, welfare and safety of all Mansfield residents, this Plan of Development encourages the creation of new student housing on the UConn campus, the maintenance of existing on-campus housing and a strict enforcement of zoning laws regarding the occupancy of single-family dwelling units.

B. Policy Goals and Objectives

The following goals have been set forth to provide policy guidelines for directing and regulating future residential development. These goals document the underlying philosophy which supports the residential land use policies of the Mansfield Planning and Zoning Commission. Although some specific recommendations for implementing these goals are included within this Plan of Development Update, it is emphasized that planning tools must be constantly evaluated and revised in accordance with new information, local experiences, changes in State Statutes, and technical advances in the field of land use planning:

- to encourage a diversity of residential developments and housing types for all income groups in Mansfield and the Windham region in an environment that is safe and healthy;

- to minimize public costs, higher density developments are encouraged near existing population/employment/service centers, near major transportation routes and in areas served by existing public utilities such as water and sewer service, fire and police protection. Higher density developments should incorporate bus stops, bicycle racks, sidewalks and other amenities that will promote public transportation and pedestrian and bicycle traffic;

- to encourage lower density development in and near environmentally sensitive areas, such as the watershed of the Willimantic Reservoir and identified aquifers, inland wetlands and watercourses, flood hazard areas, areas of steep slopes, and designated open spaces;

- to discourage non-agricultural uses on productive farmland and prime agricultural soils;

- to encourage innovative and energy-efficient designs and concepts which enable a conservation of natural resources while providing unique places to reside; cluster subdivisions and planned residential developments with mix tures of housing types should be encouraged;

- to regulate, through clear and precise performance standards, the layout, design and density of new residential developments to prevent drainage or sanitary problems. All new residential developments should be evaluated with respect to existing roadway conditions and potential traffic safety impacts.

- to prevent or minimize any detrimental effects on existing neighborhoods;

- to maintain the integrity and character of Mansfield's historic village areas, other historic structures, and sites with historic or archaeological significance;

- to encourage the development of new residential streets to minimize curb cuts on existing streets and to enhance Mansfield's scenic rural character;

- to encourage the University of Connecticut to construct new on-campus residential units and to renovate existing dormitories.

C. Implementation of Residential Designations

The Planning and Zoning Commission has determined that major residential goals and objectives can best be achieved when higher-density developments are restricted to and encouraged within specifically designated areas of Town, and when residential densities in remaining sections of Mansfield are directly related to natural and historic resource characteristics. This approach will provide for orderly growth while encouraging energy-efficient patterns of development and protecting environmentally sensitive areas and the Town's historic village areas. This approach is also consistent with land use policies contained within the State Plan of Conservation and Development and the Wind ham Regional Planning Agency Guide Plan for the Windham region. To implement this approach, five residential classifications have been established. The boundaries of the districts are determined by existing and anticipated sewer service areas, existing land uses, physical characteristics, proximity to commercial and governmental service areas, and proximity to major transportation routes. **Medium to high density areas** have been designated in existing and potential sewer service areas in southern Mansfield, in the Storrs/University of Connecticut section of town, and in areas near the junction of Routes 32 and 44 (former Mansfield Training School site). **Low to medium density areas** have been established in portions of the northwestern quadrant of town. **Low density areas** include established single-family residential neighborhoods in the Storrs area and portions of the southwestern quadrant of town. **Conservation areas** include most areas that are within the Willimantic Reservoir drainage basin and aquifer areas within the recharge area of the University of Connecticut well field along the Willimantic River north of Route 44. **Historic village areas** include village cores as described in Section IV, D of this Plan and immediately surrounding areas. The five residential classifications are depicted on the Overall Plan of Development Map included in the Appendix of this Plan.

1. Medium to High Density Areas

Medium to high density areas have been designated in southern Mansfield, in Storrs, adjacent to the University of Connecticut campus, and near the junction of Routes 32 and 44, in areas previously under the control of the Mansfield Training School. These areas either contain existing higher density developments or may be suitable for high density projects, due to existing or potential public sewer and water services, existing or potential employment, commercial and service centers, and proximity to major transportation routes. Concentrated development of medium to high density areas would provide economies of scale in construction costs, promote public transportation opportunities and, in the long term, reduced costs for public services and capital improvements. To maximize the use of available land within the established districts, higher density planned residential proposals having a variety of housing types and layouts for all income levels should be encouraged. Unless developed in conjunction with an overall master plan for housing, lower densi ty uses should be discouraged in these areas. Through the use of clustering techniques, with limited curb cuts on existing Town roads and appropriate provisions for buffering, recreation and open space, high density living environments that are compatible with existing residences can be established.

Specific regulatory controls must be utilized to ensure that higher density projects properly address potential sanitary, fire protection, drainage and traffic problems and neighborhood compatibility and buffering issues, while simultaneously providing flexibility for internal design, housing size and housing mix. Flexible density standards based on individual project designs, site characteristics and existing neighborhood character are considered appropriate. All higher density developments should include specific provisions to incorporate affordable housing units as a coordinated component of the project. Recreational amenities also should be incorporated as an integral element of a higher density residential project. Maximum overall densities of between 8 and 12 units per acre could be allowed in areas with public water and sewer services. However, in special situations, particularly in areas immediately adjacent to the University of Connecticut campus, higher densities might be considered. Carefully drafted bylaws and rules for community association governance and maintenance are considered essential for a successful planned residential project. Coordination between nearby residential develop ments should be encouraged. This approach currently is being taken by the State of Connecticut through the preparation of a master plan for residential development of vacant State land once associated with the Mansfield Training School. This Plan of Development strongly endorses coordinated planning efforts of this nature.

In addition to high density planned residential projects, a limited number of other uses are considered appropriate within the medium to high density areas. Under specific regulatory controls, boarding houses, fraternity and sorority houses, governmental uses, accessory buildings and home occupations could be allowed. Additionally, commercial uses compatible with planned residential units are considered appropriate in the medium to high density area near the junction of Routes 32 and 44. Other medium to high density areas can be served by commercial areas designated in this Plan of Development.

The following generalized boundaries for medium to high density classifications are based on existing and potential sewer service areas, the physical character of the area, existing land uses and neighboring land uses. In general, agricultural areas are not considered appropriate sites for extensions of the medium to high density classification.

In southern Mansfield, medium to high density areas have been established in the southeastern and southwestern sections of Town. These two areas are connected by a narrow medium to high density area situated south of Route 6, between Mansfield City Road and Mansfield Avenue. With the exception of a Professional Office designation at the corner of Conantville and North Frontage Roads, the southeastern district extends northerly from the Windham Town Line to Puddin Lane and is bounded on the west by Mansfield City Road and on the east by Conantville Road and Sawmill Brook. The southwestern section is roughly bounded by the Windham Town Line on the south; on the west by the Willimantic River flood hazard zone and Stafford Road (Route 32), extending approximately 3,000 feet north of the Windham Town Line; on the east by industrial land bordering Mansfield Avenue; and on the north by the approximate limits of the drainage basin of this district. While this plan does not encourage high density residential uses in the Industrial Park zone, some transitional residential uses may be appropriate at the eastern edge of this zone. Any residential use within an Industrial Park area should be

limited in size to preserve adequate areas for industrial/commercial uses.

The medium to high density area in Storrs is within or immediately adjacent to the service area of the University of Connecticut sewage treatment facility. It extends south, west and northwest of the UConn campus. More specifically, this area is bounded on the south by land adjacent to South Eagleville Road between Storrs and Separatist Roads; on the west by Separatist Road, the southern portion of Hunting Lodge Road, North Eagleville Road and Bone Mill Road from Hunting Lodge Road to the Cedar Swamp Brook streambelt, and the Cedar Swamp streambelt to Middle Turnpike; on the north by the Four Corners Townwide Commercial classification and on the east by the Research and Development Park and UConn Institutional classifications. The Courtyard condominium project, located between the Storrs Post Office and Hanks Hill Road, also has been included in the medium to high density classification.

The medium to high density area near the junction of Routes 32 and 44 has been designated in association with preliminary plans being developed for the use of land previously associated with the Mansfield Training School. It is recognized that the boundaries of this district should reflect the final plans for higher density housing in this area. The final boundaries will be determined in conjunction with a necessary rezoning of the area.

2. **Low to Medium Density Areas**

Low to medium density areas have been established in portions of the northwestern quadrant of Mansfield. These areas are considered suitable for a mixture of multi-family and single-family dwellings at densities directly related to onsite physical characteristics. Low to medium density areas are situated near major transportation routes, have convenient access to existing and anticipated commercial areas, schools, and employment centers and, in general, have fair to good physical characteristics. This district, as a complement to the medium to high density districts, helps implement the Planning and Zoning Commission's goal of focusing more dense development into the most suitable areas of Town. This approach will promote the creation of energy-efficient neighborhoods and population centers, while preserving the Town's rural char acter and historic, agricultural, natural resource and ecological attributes.

Although sewer and water services are not anticipated at this time in low to medium density districts, appropriate regulatory controls can result in creative multi-family and single-family projects that will protect environmentally sensitive areas and produce unique residential neighborhoods. A clustering of units should be encouraged. All multi-family projects should be authorized under special permit provisions to prevent sanitary, drainage, traffic and neighborhood compatibility problems. Due to the reliance on onsite sanitary systems, residential densities have to be limited and associated directly with onsite characteristics. In addition to single-family and multi-family units, the following uses are considered appropriate in the low to medium density districts: two-family homes, houses with efficiency apartments, accessory buildings, home occupations, and governmental and public service uses.

The low to medium density area in northwestern Mansfield includes land northwest and west of the University of Connecticut campus, but specifically excludes established single-family neighborhoods where multi-family uses would be incompatible, designated historic village areas in Eagleville and Mansfield Depot, designated open space classifications, a designated conservation area associated with the UConn well field aquifer area along the Willimantic River, the medium to high density area near the junction of Routes 32 and 44 and the institutional classification for the former Mansfield Training School campus.

3. **Low Density Areas**

Low density areas include established single-family neighborhoods in northwestern Mansfield and portions of the southwestern quadrant of Town. Much of this area has poor physical characteristics which severely restrict the installation and long-term use of onsite sanitary systems. This district includes existing farms and areas with future agricultural potential. This Plan of Development is designed to control development in these areas to minimize an inefficient suburban sprawl development pattern, to protect environmentally sensitive areas and to minimize developmental pressures on valuable farmland. Multi-family housing should not be allowed in the designated low density areas. Where physical characterisitics are suitable, a clustering of single-family units that do not increase overall densities should be encouraged to help preserve farmland and remaining rural character. With or without clustering, residential densities in this district should be related directly to each site's existing physical characteristics. In addition to single-family homes and agricultural uses, other uses that could be authorized in this low density area include efficiency apartments, accessory buildings, home occupations and governmental uses.

4. **Conservation Areas**

Conservation areas include most of the land that is within the Willimantic Reservoir drainage basin in the eastern portion of Mansfield and those aquifer areas within the recharge area of the University of Connecticut Willimantic River well field which is situated north of Route 44 and west of Route 32. The designated conservation areas also include the Fenton/Mount Hope/Natchaug aquifer, which has significant potential as a source of potable water. Most of the designated conservation area is rural in nature and is characterized by single-family homes on larger lots. Except for identified stratified drift aquifer areas, much of this district has severe limitations for development caused by wetlands and watercourses, steep slopes and soils that are shallow to bedrock or have a high water table.

To conserve this area's rural character and to help protect the drinking water quality of the Willimantic Reservoir and the aquifers along the Fenton and Mount Hope Rivers, residential densities should be restricted and multi-family projects should be prohibited in the conservation areas. Based on a May, 1991 DEP report, Carrying Capacity of Public Water Supply Watersheds, Windham Regional Planning Agency's 1989 Watershed Protection Study for the Willimantic Reservoir and State and regional land use plans, a maximum density of one dwelling unit per two acres of land is recommended in depicted conservation areas. Where existing physical characteristics are acceptable, a clustering of single-family units is encouraged, provided densities are no greater than

would be authorized by conventional development. In addition to single-family units, agricultural uses, owner-occupied two-family homes and efficiency apartments, accessory buildings, home occupations and governmental uses could be authorized in designated conservation areas.

5. **Historic Village Areas**

To help preserve and protect Mansfield's original village settlements, a fifth residential classification, Historic Village Areas, has been established in this Plan of Development. Historic Village Areas have been designated for Atwoodville, Eagleville, Gurleyville, Hanks Hill, Mansfield Center, Mansfield City, Mansfield Depot, Mansfield Four Corners, Mansfield Hollow, Merrow, Mount Hope, Spring Hill and Wormwood Hill. The boundaries of these areas include the core village settlements and immediately surrounding lands that contribute to each area's village character. Within these districts, residential densities and permitted use provisions should be designed to preserve existing historic resources, enhance village character and take into account the natural resource characteristics of each village area. Although provisions for neighborhood business uses should be authorized in some village areas, such as Mansfield Center and Mansfield Depot, most of Mansfield's designated Historic Village Areas should remain residential in character. In all village areas, design standards should be enacted that help ensure architectural harmony with respect to size, scale, setbacks and overall village compatibility. To promote enforceability, as well as community acceptance, design standards must be clear and simple, specific and sensitive to potential implementation costs which could affect the affordability of properties within a village area and discourage the rehabilitation of older structures. Vague and arbitrary standards must be avoided and, wherever possible, design criteria and standards should be illustrated. Additionally, provisions should be incorporated that retain farmland and scenic views, protect mill sites, greens, stone walls, trees, historic fences and other open space features. Whenever possible, new additions to structures in village areas should be located behind existing structures or otherwise designed to enhance a structure's historic compatibility.

D. Provisions to Encourage Affordable Housing

Since the initial adoption of land use regulations in the 1950's and a Plan of Development in the 1960's, Mansfield's land use policies have encouraged a diversity of housing types for all income levels. The Town's overall mix of housing types and the balance of new dwelling units built between 1980 and 1990 (367 single-family and 449 multi-family) clearly demonstrate that Mansfield has had success with this goal. It is important to note that Mansfield's 800 square foot minimum house size requirement for single-family homes has resulted in the construction of "starter homes" throughout the Town. Nevertheless, land and housing costs remain high and the creation of additional affordable housing units is an important land use objective of this Plan of Development.

After considering existing land use policies and the 1991 recommendations of the Mansfield Housing Partnership Committee, the following provisions are endorsed to encourage or require additional affordable housing units in the Town of Mansfield:

1) Continuation of current policies that: authorize higher density multi-family housing developments, including elderly housing projects under specialized provisions, in many areas of Town; authorize two-family and efficiency unit apartments in most areas of Town; establish 800 square feet as the minimum dwelling unit size for single-family homes throughout the Town; and establish reasonable construction standards for road widths, curbing, storm drainage and other infrastructure improvements;

2) Incorporation of carefully designed standards for developing, where physical characteristics are suitable, cluster housing projects in most areas of Town. In association with cluster regulations, consideration should be given to provisions for sewers, community septic systems and wells, flexible set backs and zero lot lines, reduced lot frontages and rear lots, reduced roadway widths, common driveways, private roads and other measures to reduce infrastructure and development costs. With these measures and without an increase in overall density, cluster provisions should promote a reduction in housing costs and become an important tool for protecting the Town's agricultural, environmental and historic assets.

3) Incorporation of specific provisions for "inclusionary" zoning for all larger residential developments. Such a program could require a certain percentage (for example, twenty percent) of all units in multi-family developments and larger subdivisions to be designated and developed as "affordable housing," as per State or local definitions. Covenants or other legal mechan isms should be required to ensure that the new affordable units remain afford able into the future. As part of an inclusionary program, density bonuses may be incorporated in the medium to high density areas and low to medium density areas where site characteristics are favorable for development and where a higher percentage of affordable units is proposed.

4) Incorporation of more uniform density standards for multi-family projects with mixtures of two-family and multi-family housing types. Currently, zoning requirements for multi-family developments apply different density requirements for single-family, two-family and multi-family units within a

specific project. Regulations also should encourage single-family units within the multi-family project.

5) Consideration of housing rehabilitation programs to help restore and maintain Mansfield's existing housing stock and to help maintain property values

6) Consideration of specific provisions for authorizing mobile home subdivisions as part of a cluster development. To promote neighborhood compatibility, regulatory provisions should limit the number of units per project.

7) To encourage the formulation and use of a Housing Trust Fund (as per Public Act 91-204) to promote affordable housing opportunities.

8) Consideration of specific provisions for authorizing "ECHO" (Elderly Cottage Housing Opportunity) housing units. "ECHO" housing units are detached modular units designed for interim placement on the same lot as another dwelling unit. Any provisions to allow "ECHO" housing units in Mansfield would have to address potential sanitary and neighborhood impact issues as well as inappropriate occupancy and the removal of the "ECHO" units after the approved interim placement and occupancy has lapsed.

E. Other Residential Recommendations

In addition to the residential recommendations cited in previous sections of this Master Plan Update, the Planning and Zoning Commission has established the following list of suggestions to assist with the implementation of specified residential objectives. It is important to note that this listing should not be considered all-inclusive, and that other ideas or methods of implementing residential goals may provide appropriate courses of action.

- The Town encourages the University of Connecticut to make provisions for adequate housing for students and University employees near the Storrs campus. If the University cannot build the needed housing itself, utility services and, possibly, land, could be provided to private developers. New residential developments on or near the UConn campus should be designed to minimize impacts on nearby single-family residential neighborhoods.

- Many of the objectives of this Plan of Development would be promoted by the enactment of carefully designed regulations for cluster development. Cluster regulations must take into account soil types, terrain and infrastructure capacity, and cluster developments should have an overall density no greater than would be allowed in a conventional development. For larger subdivisions, consideration should be given to requiring the submission of both cluster and conventional plans. However, the Planning and Zoning Commission should be granted the right to decide the appropriate plan of development for the subject site. The submitted plans for conventional development must include adequate natural resource information, so that a determination can be made regarding the likely number of conventional lots. This number would provide a basis for the number of lots in a cluster development plan. Through carefully drafted regulations and procedures, uncertainties regarding this process can be minimized.

- Due to Mansfield's physical characteristics, all proposed developments of individual lots with onsite septic systems and wells, must be designed carefully to ensure that there is adequate usable land for the residential structures, septic system, septic reserve area and well. It is recommended that all residential lots with onsite systems in a conventional, as compared to a cluster development plan, contain a contiguous area at least 30,000 sq. ft.in size that does not contain water courses or inland wetland soils, visible ledge or slopes exceeding twenty percent. This contiguous area is considered necessary for the long-term use of onsite sanitary systems within a conventional subdivision development in a town with Mansfield's overall physical characteristics as described in Chapter V.

- Under specific regulatory control, mixed use projects with both residential and commercial units may be appropriately developed in certain commercial areas of town. In addition, some limited-size residential uses also may be appropriate as part of a transitional use design along perimeter locations of the Town's Industrial Park zone. (See Chapter VII for more specific recommendations for possible residential uses in designated commercial areas.)

-An effort should be made to promote energy-efficient designs and patterns of development. Zoning and subdivision regulations should be reviewed to incorporate incentives for solar, earth-sheltered and other energy-efficient designs. Incentives that could be considered are reduced frontage requirements on new east-west roadways and flexible setback requirements.

- All higher density residential projects, including, but not limited to multi-family housing developments, should be designed to promote pedestrian and bicycle use and public transportation opportunities (see Chapter XI for transportation goals and objectives).

- To protect environmentally sensitive areas and to help prevent inappropriate sewer projects, land use regulations should discourage a widespread use of septic systems requiring extensive amounts of fill to meet health standards. A site's original physical capabilities should be the prime determinant in setting residential densities in non-sewered areas.

- "Co-housing" projects with shared community facilities are considered an acceptable land use option in Mansfield, provided overall densities are no greater than otherwise allowed in a subject area.

- To enhance Mansfield's rural character and to minimize curb cuts on local roadways, regulatory provisions for new road construction and common driveways should be considered. Common driveways are most appropriate in cluster development projects and in situations where extensive grading, filling or tree removal would be necessary to address sightline problems or natural resource constraints.

- University of Connecticut officials should be encouraged to help educate students living in off-campus housing to be good neighbors to nearby residents. UConn's assistance with the enforcement of a good neighbor policy would be an important contribution to the Town of Mansfield.

- This Plan of Development Update recommends an expansion of designated conservation areas. Implementation of this recommendation will result in the creation of some new nonconforming lots, particularly in Mansfield Center, Mansfield Hollow and areas along Route 195. To help minimize land use impacts that these changes could create, zoning provisions for nonconforming lots should be reviewed to ensure that existing residences and lots can continue to be used in a reasonable manner that is consistent with the environmental protection objectives of this Plan of Development.

- To minimize potential problems for residents either in the vicinity of a proposed sand and gravel removal site or along a proposed haul route, all larger sand and gravel removal projects should be reviewed under specific special permit standards. Applicable approval criteria should protect affected residential properties from potential traffic safety and environmental problems and from potential nuisance problems such as noise and dust. All proposals for sand and gravel removal shall include a restoration plan that is directly related to uses allowed in the subject zone. To address potential compatibility problems, some areas of town may be considered inappropriate for larger sand and gravel removal projects.

On an application-by-application basis, consideration should be given to limiting hours of operation, limiting the amount of material removed per day, week, month or year, and restricting removal activities during summer months and weekends, when impacts on nearby residential uses may be most significant.

VII, COMMERCIAL LAND USE

A. General

As the Town of Mansfield and neighboring communities grow in terms of population and number of structures, the demand for commercial goods and service also will increase. The commercial land use section of this Plan of Development establishes a framework within which the existing and future commercial needs of Mansfield residents can be met and within which the Town's commercial tax base can grow. In evaluating the Town's commercial needs and opportunities, the Planning and Zoning Commission has analyzed existing land uses; natural resource characteristics; existing zoning and regulatory provisions; State and regional land use plans; the location and nature of commercial centers in nearby municipalities; existing and anticipated transportation and public utility capabilities; and the policy goals and land use recommendations contained in other sections of this Master Plan. Much consideration has been given to the goals of promoting an energy efficient pattern of development; protecting environmentally sensitive areas; ensuring vehicular and pedestrian safety; and protecting residential and historic areas from potentially detrimental land use impacts.

In the past, Mansfield residents have purchased most of their durable goods (automobiles, appliances, furniture, etc.) in larger communities such as Willimantic, Vernon, Manchester or Hartford. Most non-durable goods (foods, drugs, clothing, etc.) and professional services have been available in Town, but selection was limited. This commercial situation began to change in the 1970's and, currently, a higher percentage of the Town's commercial needs, particularly non-durable goods and services, can be met locally. Since 1980, a significant amount of commercial development has occurred in Mansfield. In southern Mansfield, along or near Route 195, over 130,000 square feet of new retail or office space was constructed, and, in areas near the University of Connecticut campus, approximately 40,000 square feet of new commercial space was built. Smaller commercial projects were built near the junction of Routes 32 and 31 and in various other locations in Town. Residents continue to meet a majority of their durable goods needs out of Town, but there now exists in Mansfield a greater supply of durable and non-durable goods, restaurants and professional services. The southern portion of Route 195 has become a regional townwide commercial service area and other large commercial areas are established along Route 195 in Storrs and along Routes 195 and 44 in the "Four Corners" area.

This Plan of Development is designed to address the Town's commercial needs up to and beyond the year 2002. It is recognized that some areas designated for additional commercial development may not be rezoned or utilized commercially in the next decade. However, to promote a compatible mix of land uses and to ensure suitable space to meet the Town's commercial needs in the future, it is essential that adequate commercial areas be designated at this time. It is unlikely that new areas appropriate for commercial development will be able to be established in the future without potentially detrimental impacts on the Town's natural or historic resources or adjacent residential areas. Approximately 425 acres of land have been designated within two commercial classifications (Planned Business or Professional Office). This acreage constitutes about

1.5% of the Town's total area. Although the general locations designated for commercial uses are not significantly different from those designated in the 1982 Plan of Development, a number of important revisions have been incorporated in this update. Additionally, this Plan of Development eliminates a distinction between Townwide and Neighborhood Commercial areas. This Plan recognizes that each designated commercial area is a unique district with particular neighborhood and environmental characteristics. In order to better promote the overall goals of this Plan of Development and help reduce potentially detrimental impacts associated with commercial land uses, this Plan does incorporate a specific distinction between planned business and professional office land use classifications.

Some notable revisions from the 1982 commercial classifications include: a small commercial area in Merrow has been deleted; an industrial/commercial area along Route 32 near the junction of Route 31 has been reclassified to Planned Business; new Planned Business areas have been designated near the junction of Routes 32 and 44; a new Professional Office area has been designated along Route 195 north of Riverview Road; a Professional Office area has been deleted along Route 195 between Flaherty Road and East Road, and the overall size of the Storrs, Four Corners and Mansfield Center commercial areas has been reduced and significant portions of these areas have been redesignated to a Professional Office classification. These revisions are explained in more detail within subsections B through D of this chapter.

B. Commercial Policies and Recommendations

After an analysis of Mansfield's physical characteristics, existing patterns of development and the overall goals and objectives of this Plan, it was determined that commercial needs can be addressed most appropriately by designating a number of commercial areas, each with its own specialized regulatory provisions. Nine separate commercial areas have been designated. These areas are depicted on the Overall Plan of Development Map included in the Appendix to this Plan. Mansfield's approach to commercial land use is designed to facilitate energy-efficient shopping patterns, to help minimize potential environmental impacts and neighborhood compatibility problems and to help preserve and enhance the positive elements of each of Mansfield's designated commercial areas. The establishment of commercial areas at locations not specified in this Plan should be discouraged. Of importance, the distinct character of each of Mansfield's commercial areas should be reflected and provided for in each location's permitted use provisions and regulatory standards. Wherever possible, existing structures with historic character or architectural significance that are within a designated commercial area shall be preserved and utilized in a manner compatible with the permitted use provisions for the subject area.

To further promote the goals and objectives of this Plan, two distinct commercial land use classifications have been incorporated. In general, Planned Business districts are designed to provide for a mixture of retail, service and office uses, while Professional Office districts are designed to provide for lower-intensity office uses. Professional Office districts may also serve as a transitional use between Planned Business and residential land uses. For each of Mansfield's designated areas, a very specific delineation has been made between properties designated as Planned Business and as Professional Office. The actual mix of permitted uses within each Planned Business and Professional Office district must be specifically designed to provide for projects and uses that are compatible with each commercial area's particular characteristics. (Subsection C of this chapter provides more details on Mansfield's designated Planned Business areas and subsection D provides more details on designated Professional Office districts.)

Zoning policies consistent with this Plan should encourage the development of carefully and attractively designed commercial areas with controlled access and internally coordinated vehicular and pedestrian circulation patterns. Disjointed strip developments with numerous curb cuts should be discouraged. Traffic impacts are particularly important for all commercial areas along Storrs Road (Route 195) and new curb cuts should be discouraged along this road. All commercial developments should be designed to promote public transportation and non-motorized access. All plans for commercial projects should include bus stops, bicycle racks and lockers, sidewalks and other measures to promote alternatives to automobile access. To minimize safety, drainage, sanitary, residential compatibility and other developmental problems, new commercial proposals must be reviewed under precise special permit or site plan standards and approval criteria. In addition to addressing environmental protection criteria, commercial developments should be of a scale and design to be compatible with neighboring land uses. Landscape buffers, lot size and lot coverage provisions and other measures shall be incorporated to minimize impacts on nearby historic and residential properties and to enhance site aesthetics. Whenever possible, existing historic structures shall be preserved. As regional

competition increases in the future, it will be important that Town officials work with local businesses to promote consumer amenities, such as pedestrian walkways, benches, bus shelters and bike lockers, and to promote site aesthetics. Diversified product lines and flexible hours of operation should be encouraged to promote local business.

C. Planned Business Areas

1. Route 195/Route 6 Planned Business Area

This existing commercial area is located along Storrs Road (Route 195) and extends from the Windham Town Line to the junction of Conantville Road, which road also generally delineates the western edge of this district. The existing residential areas along Riverview Road and the existing properties located east of Route 195 and north of Riverview Road are excluded specifically from this Planned Business district.

Most of this designated Planned Business area is served by sanitary sewers and a public water supply and, therefore, higher commercial densities and an extensive range of commercial services, including facilities utilizing large volumes of water, are possible in this district. Townwide, as well as regional access is facilitated by the proximity of the limited access portion of Route 6 and its location on Storrs Road. To help minimize traffic congestion in this area, regulatory provisions must restrict the number and location of curb cuts on existing roadways and, wherever possible, shared accessways and parking facilities should be encourged. To promote vehicular and pedestrian safety, developer-financed improvements on or adjacent to public roadways may be appropriate. In addition, regulatory incentives should be adopted to allow joint development of parcels and to encourage new internal circulation patterns among parcels. The preferable development pattern would have buildings oriented toward internal circulation ways off Route 195. To address an existing traffic safety concern, any expanded use of the College Mart Plaza (east side of Route 195 immediately north of Route 6) must include a relocation of the access drive for this site to a new location opposite North Frontage Road. Additionally, improvements that promote public transit use and pedestrian/bicycle access, such as a sidewalk connecting the Windham side of Route 6 to commercial uses in this area, should be supported as significant public safety improvements.

Although approximately ninety percent of this district, which is about 100 acres in size, currently is associated with existing uses, it is the Commission's opinion that a carefully planned use of undeveloped land, in association with a creative and coordinated reuse of some of the existing properties, present opportunities for commercial growth. However, due to the limited amount of readily available space, commercial uses with large space requirements, such as contractors' equipment sales or storage operations, should not be allowed. Residential uses are not appropriate in this district. Expansions of this Planned Business district cannot be recommended, as expansion could create traffic problems and nuisances for existing residential areas. Nearby residential areas include properties on the easterly side of Route 195 north of Riverview Rd., properties along Riverview Rd., and properties along the northerly and westerly sides of Conantville Rd. Subsection D of this chapter provides information regarding a professional office use west of Conantville Rd. and a potential professional office area along Route 195 north of Riverview Rd.

2. Route 32/Route 31 Planned Business Area

A second Planned Business area in southern Mansfield is located along Route 32 in the vicinity of Route 31. Most of this area was designated as a mixed Industrial/Commercial area in the 1982 Plan of Development, but this district

also includes the 1982 designated "Perkins Corner" neighborhood commercial area. It also is important to note that land immediately south of Stearns Road which was previously designated as Industrial/Commercial has not been included in this Commercial designation and is now classified as low density Residential. This district currently is not served by public sewer and water services, but it could be served by extensions of existing public systems. This district is located along State roads, and it is approximately one mile from a full Route 6 interchange.

This area has been redesignated to a Planned Business district to reflect existing commercial land uses, to minimize potential environmental impacts that could be associated with industrial uses, and to minimize potential noise and nuisance impacts for nearby residential areas. Existing commercial uses in this area include retail stores and services, professional offices, automotive repairs, a drive-in theatre and a bowling alley. This area is approximately 120 acres in size, and approximately 30 acres appear suitable for development or redevelopment.

As with the other Planned Business districts, all new uses should be reviewed carefully under specific site plan and special permit standards. To promote traffic safety along the adjacent State highways, zoning requirements should encourage a shared use of driveways and parking areas. Site improvements to promote pedestrian safety and public transportation should be required. All projects should be designed to minimize neighborhood nuisance problems and to prevent environmental problems. A number of residential uses exist within this district and some additional residential use, particularly when designed as a transitional land use, may be acceptable. This district is not considered suitable for new single-family residential developments on individual lots.

3. Storrs (Route 195/Dog Lane) Planned Business Area

This Planned Business district extends about 1,000 feet east of Storrs Road (Route 195) and south of Dog Lane. This commercial area contains approximately 25 acres, of which about 10 are currently undeveloped and potentially developable. Properties associated with existing uses are located along Storrs Road and in areas near the junction of Dog Lane. This district contains the existing University Plaza, Storrs Commons and Marketplace shopping centers.

This district is intended for retail and service uses sized and scaled to meet local consumer needs and minimize potential traffic and neighborhood impacts. Projects with a coordinated mix of commercial and residential uses also are considered suitable for this area. Regulatory provisions should exclude commercial uses that are incompatible with the mixed-use character and potential of this general area. This district is served by University of Connecticut sewer and water systems, and any significant expansion of commercial uses will not be possible without an extension of public water and sewer services. Clusters of smaller buildings in a village setting would be a preferred development pattern for undeveloped land in this district, and zoning regulations should preclude larger shopping center buildings. Shared access and parking facilities at strategic locations is preferred to onsite parking and individualized access for each developed lot. Careful integration of any development with adjacent uses must be ensured through regulatory provisions for site design and landscaping.

Although this commercial area does not have historic significance in association with any of Mansfield's village centers, this district has become increasingly important as a commercial and government center. During the last thirty years, many new developments on nearby properties have affected this area. UConn dormitories and classrooms were constructed to the north and west, the Storrs Grammar School was converted to the Audrey P. Beck Municipal Building and E.O. Smith High School was expanded and became regionally owned and operated, with Mansfield assuming a majority voting interest. Additionally, a new Storrs Post Office was constructed and new multi-family housing designed for senior citizens and persons with disabilities has been built near the junction of South Eagleville Road and Maple Road. In the 1980's, the Courtyard at Storrs condominium project was built on land immediately south of the Storrs Post Office. These new developments have helped increase the demand for commercial uses. University Plaza and the Storrs Commons commercial developments were constructed, and other existing commercial uses were modified and upgraded. Recently, a Greek chapel and cultural center were approved on Dog Lane and construction on this facility has begun.

With its centralized location and with the potential to focus additional development on State-owned land east of Route 195, this area has the potential to further evolve into an attractive commercial area for Mansfield. Whereas the existing undeveloped land in this commercial district is owned by the State of Connecticut, it will be essential to coordinate the planning of future commercial development with UConn officials. This planning activity should be an issue for the recently formed Mansfield/UConn coordination committee. Additionally, special attention must be given to design aesthetics and pedestrian and public transit amenities such as benches, bike racks, covered bus shelters, and specially-designed gathering places in a small park or village green setting. Opportunities for small parks or greens exist between the Marketplace and Storrs Commons shopping center, south of the University Plaza shopping center and in the vacant areas that could be developed. Landscaping and lighting improvements along Route 195 and the burial of existing overhead utility lines will promote the aesthetics of this area. The creation of additional off-street parking to the east of existing uses also could contribute to the commercial attractiveness of this area.

In addition to potential noise and nuisance impacts for nearby residential areas, anticipated impacts on traffic circulation in Storrs must be a major concern in reviewing proposed developments in this area. The nature (volume and timing) of increased traffic must be assessed with respect to the large volume of pedestrian traffic in Storrs and the capacity of Storrs Road to accommodate vehicular traffic efficiently and safely. Although the undeveloped land in this district is not located adjacent to Storrs Road, opportunities exist for new internal circulation roadways and coordinated in-depth development. Access to undeveloped areas could be obtained from the rear parking areas of the Storrs Commons or Marketplace developments, or, possibly, subject to a resolution of sightline and traffic issues, from an existing UConn service road off Dog Lane, immediately east of the Fleet Bank and NECA Computer Store properites. A roadway connection from the Storrs Post Office road is not considered feasible, due to an extensive area of wetland soils. In addition, Hanks Hill Road and Dog Lane east of the Bishop Center driveway should not be used for access to this district, due to existing residential land uses.

Land along Hanks Hill Road east of the Courtyard at Storrs development, land along Dog Lane east of the UConn service road land along Route 195 south of the University Plaza site and State-owned land immediately east and south of the designated Planned Business area have been deleted from this district due to physical characteristics, to reduce potential impacts for existing residential properties and to reduce traffic impacts. However, the easterly portion of the State-owned land, a portion of the land east of the Courtyard at Storrs residential development (subject to obtaining access only from the Storrs Post Office road and not from Hanks Hill Road) and land along Route 195 south of the University Plaza site have been designated as Professional Office (see subsection D of this chapter).

4. North Eagleville/King Hill Road Planned Business Area

A Planned Business district has been designated along North Eagleville and King Hill Roads. Most of this area was included in a Neighborhood Business zone in the 1982 Plan of Development. This area is adjacent to the University of Connecticut campus and many, but not all of the properties have access to the University's sewer and water systems. This district is adjacent to the southern end of the Connecticut Technology Park spine road, which, when completed, will become a primary accessway to the University. The site also is situated near commuter parking lots and a number of University dormitories.

This district is approximately 15 acres in size. It includes the College Square shopping center and a number of smaller commercial businesses along N. Eagleville and King Hill Roads. Currently, there is a food service/restaurant orientation, but the area has potential for additional office and retail goods and services. This zone has some expansion potential along the southerly side of King Hill Road, but it should be restricted from expanding to the west of King Hill Road to reduce potential impacts on the environment and neighboring residential properties. All of this commercial district should be served by the nearby University of Connecticut sewer and water systems.

5. Four Corners (Route 195/Route 44) Planned Business Area

This existing commercial district is situated at the junction of Middle Turnpike (Route 44) and Storrs Road (Route 195). In addition to land in the immediate vicinity of this intersection, this commercial district extends northerly from Route 44 along the westerly side of Route 195 and westerly from Route 195 along the northerly side of Route 44. This district also includes property on the south side of Route 44 currently occupied by two bank buildings. Much of the Four Corners area has been developed with a variety of retail, office, restaurant, automotive and service uses. Existing residential areas exist to the north (Timber Drive area), to the west (Jensen's Mobile Manufactured Home Park), to the east along Route 44 and to the south along Route 195. A number of historic homes are located along Routes 44 and 195 to the east and south of the designated commercial area. A twenty-unit multi-family housing development (Rosals Apartments) is located within this designated commercial area. The Four Corners area is dependent on onsite wells and septic systems and there are no current plans to extend public sewer and water service to this area.

The designated Four Corners Planned Business district is approximately 60 acres in size, but it contains significant areas with poorly-drained soils, designated

wetlands and a high water table. Ground water quality problems have occurred due to leaking underground fuel storage tanks and a number of existing uses in this area utilize water filtration systems. High volumes of vehicular traffic, primarily to and from the University of Connecticut, utilize Routes 195 and 44 in the Four Corners district. The Connecticut Technology Park project is expected to add traffic volumes to this area. However, through the construction of a new road from Route 44 to North Eagleville Road and a careful design that coordinates traffic signals and promotes alternative modes of transportation, traffic issues can be addressed suitably.

Due to the nature of existing commercial land uses, the Four Corners area is considered a Planned Business area. However, due to the area's physical characteristics and its lack of existing or anticipated public sewer and water systems, this district has limited potential for additional intensive commercial development. Of all the undeveloped land within this Planned Business district, the Centerbank property, which is located adjacent to the expected Connecticut Technology Park roadway, appears to have the greatest development potential. Permitted use provisions should be revised to limit or prevent high water uses such as restaurants, hotels and laundromats. An elimination of additional automotive uses, such as garages and gas stations, also should be considered. As with other commercial centers along State highways in town, traffic safety is a paramount concern, and any development or road improvement proposals in the Four Corners area must be reviewed carefully to prevent detrimental traffic impacts. Any new developments should be designed to minimize curb cuts and promote shared access and parking facilities. Sidewalks, bike racks, bus stops and other public transit and pedestrian amenities should be considered in all new development applications and road improvement projects. Linear expansions of retail uses along State highways should be discouraged and this district should not be expanded along Route 44 or Route 195 beyond the limits depicted in this Plan. To help reduce potentially detrimental impacts on the environment and neighboring residential properties and to help reduce potential traffic safety problems, portions of the previously designated townwide commercial area at Four Corners have been reclassified as Professional Office in this Plan of Development Update (see subsection D of this chapter).

To promote the environmental protection, traffic safety and neighborhood preservation objectives of this Plan, all development applications in the Four Corners area should be reviewed under comprehensive special permit regulatory standards. High priority should be given to protecting neighboring historic structures and the nearby Cedar Swamp from potential detrimental impacts. Additionally, nearby residential uses should be protected from lighting, noise, nuisance and traffic impacts. Any proposal adjacent to an existing residential use must include extensive buffering improvements to help reduce impacts. All commercial uses must be attractively landscaped.

6. Route 32/Route 44 Planned Business Areas

In conjunction with the development of a Housing Master Plan for surplus State land and buildings that were previously associated with the Mansfield Training School, small, but potentially significant Planned Business areas are designated near the junction of Routes 32 and 44. These commercial areas are designed to serve residential and governmental uses on State-owned land along Routes 44 and 32. Many of the Mansfield Training School buildings recently were converted to

new governmental uses and additional office and University of Connecticut-associated uses are expected. A Master Plan for housing and related commercial development is currently being prepared and up to 375 new residential units could be constructed in this area. These designated commercial areas are expected to serve their immediate neighborhood and provide retail, office and personal service uses to individuals using Routes 44 and 32. A May, 1992 draft Master Plan, which is currently undergoing an environmental assessment, proposes 88,000 square feet of new commercial space.

These designated commercial areas can be served by public water and sewer systems. All commercial buildings should be designed to compliment each other and proposed housing units on adjacent land. Provisions for pedestrian walkways, public transportation amenities, screened parking lots and limited curb cuts on the State roadways are recommended. As part of a carefully planned new Village Master Plan, these commercial districts can be an asset to nearby residents and a model for compatible neighborhood village design.

7. Mansfield Center Planned Business Areas

The Mansfield Center Planned Business areas are intended as small-scale retail and office districts providing general neighborhood services and specialized retail uses compatible with the district's historic village character. This Plan of Development designates two small Planned Business areas in Mansfield Center, but the size of this commercial area has been significantly reduced from the area designated in the 1982 Plan of Development. The reduction of this commercial area is based on many of the goals and objectives of this Master Plan, including the protection of natural resources, the protection of historic resources, and the objective that additional commercial development should be concentrated in the larger Planned Business districts in conjunction with an overall energy-efficient pattern of land use. Mansfield Center contains a number of existing businesses that warrant the retention of a commercial classification. However, this commercial area should not be expanded beyond the limits designated in this Plan, due to its location within the Willimantic Reservoir watershed, its location over one of Mansfield's most significant stratified drift aquifer areas, and its proximity to established historic districts and numerous historic structures and sites. Additionally, this area is situated along a busy segment of Route 195 and it lacks existing or anticipated public water or sewer facilities.

To help reduce potential traffic and environmental impacts, properties between the Mansfield Center Post office and Cemetery Road have been redesignated as Professional Office in this Plan of Development Update. The Professional Office classification will provide, through alternative design district standards, a reuse alternative for multi-family housing uses that currently exist. Consideration was given to a Residential designation of this area along Route 195, but the retention of regulatory controls associated with a Design District classification was deemed more appropriate with respect to environmental and traffic safety objectives (see subsection D of this chapter). In addition, the Old Mansfield Center Cemetery and an open field area south of the Cemetery have been redesignated to an open space classification in this Plan of Development. This revision is designed to help preserve important historic and environmental features. The Old Mansfield Center Cemetery is on the National Register of Historic Sites and the Eaton Bog is considered an important environmental and

historic asset.

The designated Planned Business areas in Mansfield Center cumulatively are about 10 acres in size. The northerly district contains the Barrows and Burnham general store, which is within the Mansfield Center Historic District and extends southerly along the easterly side of Route 195 to include an existing house at the corner of Centre Street and Route 195 and the adjacent Mansfield Center Post Office. This Planned Business area south of Centre Street extends 300 feet east of Route 195. The southerly district extends along the easterly side of Route 195 from the Experience Storrs farmhouse southerly through properties bordering Bassetts Bridge Road. The designated area ranges from 300 to 500 feet east of Route 195. These Planned Business areas include existing retail stores, professional offices, a restaurant, a Post Office and an auto repair business. A few additional commercial businesses, which are not within the designated Planned Business district, are located along the westerly side of Route 195. However, due to traffic safety and other noted land use concerns, land west of Route 195 has been excluded from this district.

The Mansfield Center Planned Business areas are designed to provide general neighborhood services and retail uses that do not threaten the area's environment and are compatible with the district's historic village character. Conversions of existing structures or the construction of small-scale individualized buildings should be the type of development permitted. Structures could be jointly utilized for low intensity commercial uses and one or two residential dwelling units, but any use which generates significant volumes of traffic or requires large structures or large parking areas should not be permitted. Multi-family housing developments are not considered appropriate in this Planned Business district. To reduce individualized access to existing roads, a maximum effort should be made to encourage coordinated accessways and parking arrangements. Provisions to promote pedestrian access and public transportation also should be incorporated into development plans.

To ensure protection of the 18th and 19th century historic resources in Mansfield Center and to guard against potential environmental and traffic safety problems, specific limitations must be placed on the range of permitted uses, and special permit approval should be required for all new uses. Existing multi-family, restaurant and auto repair uses should remain classified as non-conforming uses, but these non-conformities should not be expanded, in order to help protect the important aquifer area underlying this district. To regulate proposed development in this area suitably, it is recommended that land use controls limit building and parking coverage, limit the square footage of commercial buildings, promote compatible designs, encourage appropriate landscaping and buffering and address potential lighting, signage and outdoor storage issues. It also is very important that development projects be designed to retain important open space vistas from Route 195 easterly, particularly to the Eaton Bog area between Cemetery and Bassetts Bridge Roads.

8. Mansfield Depot Planned Business Area

The Mansfield Depot Planned Business area is intended as a small-scale retail and office district providing general neighborhood services and specialized retail uses compatible with the district's historic village character. Conversions of existing structures or the construction of small-scale

individualized buildings should be the only types of development permitted. Wherever possible, existing historic structures shall be preserved in conjunction with a development or reuse proposal. A careful placement of parking and landscaping improvements and a sensitive design of individual structures and signs will be of paramount importance. Individual structures should be jointly utilized for residential and low intensity commercial uses, such as professional offices, but uses generating large volumes of traffic or requiring large-scale structures or large parking facilities should not be permitted. As an example, the existing general store and specialized restaurant are consistent with the planning goals for this area, but a fast food restaurant would be inappropriate. To ensure protection for this historic village, specific limitations must be placed on the range of permitted uses and special permit approval should be required for all new uses. In addition, special setback, coverage, design and parking requirements should be considered, to permit adequate control of any commercial development.

The designated commercial district is limited in size, approximately 7 acres, and has few vacant areas. To help preserve the historic village character of Mansfield Depot, expansions of this commercial zone, particularly along Depot Road, should be discouraged, and a few properties on Depot Road which are currently zoned Business should be rezoned in a residential land use classification.

9. Routes 32 and 195 Planned Business Area

Approximately 10 acres of land along the western side of Route 32 at the junction of Route 195 have been designated as a Planned Business district. Due primarily to an existing gasoline station/convenience store and a bus storage area, this location is considered appropriate as a small general purpose commercial area. Due to its location near the Willimantic River and within a designated stratified drift aquifer area, special care must be taken to make sure commercial development does not affect surface or ground water quality. To guard against potential environmental and traffic safety problems, specific limitations should be placed on the range of permitted uses, and special permit approval should be required for all new uses. Furthermore, this district should be restricted in size and should not be expanded beyond the area designated in this Plan.

D. PROFESSIONAL OFFICE AREAS

To help ensure an availability of land in the Town's Planned Business areas, to help minimize potentially detrimental land use impacts in many of the Town's designated commercial areas and to provide some development flexibility for less intensive professional office uses, this Plan provides for a second commercial classification, Professional Office areas. This classification is appropriate in locations where a Planned Business designation could be problematic because most office uses are not characterized by the traffic and sanitary issues associated with other commercial uses. Uses that could be permitted in a Professional Office area should be generally restricted to offices for medical, legal, insurance, real estate, financial services, offices for governmental, educational and civic organizations, and public utilities. On a location-by-location basis, churches, schools, libraries and residential uses may also be suitable in a Professional Office area. To help ensure land use compatibility, permitted use provisions for each Professional Office area should be designed to address particular natural resource and neighborhood characteristics for the specific location. Wherever possible, existing structures with historic or architectural character shall be preserved and utilized in a manner compatible with the permitted use provisions for the particular Professional Office area.

All development or redevelopment in a Professional Office area must have a safe and suitable access that will not create or worsen a traffic safety problem. Future impacts on surrounding residential, historic or natural resource environments should be major review factors for all developments in an existing or proposed Professional Office area. New Professional Office developments should not result in identifiable adverse effects on neighboring property values or the environment. Compatibility with nearby residential areas should be promoted through lot size, lot coverage, landscaping and buffering measures. Parking facilities should be located to the side or rear of new office buildings whenever possible.

Although some locational flexibility is possible for professional offices, all Professional Office areas must be carefully situated and carefully reviewed to avoid health, safety, nuisance and environmental problems. In general, Professional Office areas have been located adjacent to or in close proximity to established Planned Business areas, where authorized uses can serve as a lower intensity buffer for residential and environmentally sensitive areas. In addition, but only on a very selective case-by-case basis, this commercial classification can be utilized in other areas of Town to provide an effective means to conserve historically or architecturally significant structures. An uncoordinated creeping conversion of land along major roadways to non-residential use is not in accordance with this Plan.

In conjunction with the land use classifications of this Master Plan, a number of locations have been designated as Professional Office areas. The exact location of the areas so designated has been considered carefully and any proposed redesignation of these areas, particularly to a Planned Business classification, would undermine important objectives of this Plan of Development. It also is important to emphasize that this Plan identifies some Professional Office areas that may not be needed for decades. Some of these areas currently are used residentially, and any proposed rezoning must consider the appropriateness of the timing of the proposed zone change and the potential

impacts on neighboring properties. It will be most appropriate to consider potential rezonings of an entire grouping of adjacent properties, rather than on a lot-by-lot basis. Professional Office areas have been designated on the Overall Plan of Development Map in association with the Route 195/Route 6 Planned Business area; the Storrs (Route 195/Dog Lane) Planned Business area; the Four Corners (Routes 195/44) Planned Business area, and the Mansfield Center Planned Business area.

1. Professional Office Areas Associated with the Route 195/Route 6 Planned Business Area

Two Professional Office areas have been designated in southern Mansfield near the Route 195/Route 6 Planned Business area. Both of these areas are served (or can be served) by public water and sewer systems. The westerly area is located immediately north of North Frontage Road and west of Conantville Road. It contains the partially completed Ledgebrook Office Park project. The easterly Professional Office area is situated along the easterly side of Route 195 from Riverview Road to the Willimantic Water Works property. This second area, which is currently zoned and used residentially, is considered appropriate for future rezoning. Due to the existence of a number of smaller adjacent lots, if this area is rezoned to allow professional office uses, the entire area should be redesignated at one time, and not on a lot-by-lot basis. This area has been designated for future professional office uses due to its frontage along a busy segment of Route 195, existing business uses along the westerly side of Route 195, its access to public sewer and water, and its physical characteristics. It has the potential for redevelopment into a coordinated and compatibly designed office park project similar to the Ledgebrook development. Any development of this area must address traffic safety issues along Route 195 and potential neighborhood impact problems for residential properties along Riverview Road. Any professional office development in this area should be designed with access off an internal roadway with limited curb cuts onto Route 195.

2. Professional Office Areas Associated with the Storrs/Route 195/Dog Lane Planned Business Area

Professional Office areas have been designated east and south of the Storrs Planned Business area. The easterly Professional Office area is on State-owned land, of which western portions of this lot are designated Planned Business. The Professional Office designation is based on site topography and is designed to help lessen potential neighborhood impacts for nearby residential properties and to minimize potential traffic impacts on Route 195 and Dog Lane that could arise if the entire State parcel were developed with Planned Business uses. The southerly Professional Office area is situated along the easterly side of Route 195, from the University Plaza to the southerly end of Flaherty Road. This area also includes land east of the Storrs Post Office and Courtyard at Storrs residential development, subject to obtaining access only from the Post Office road, and not Hanks Hill Road. As with all commercially designated areas along Route 195, potential traffic impacts will be important considerations for any developments in these areas. Sanitary issues also will be important for properties that cannot be connected to the UConn sewer and water systems. With the exception of the area east of the Post Office where access rights are uncertain, existing zone classifications should be revised upon approval of this Plan to implement the Professional Office recommendations for this area.

3. Professional Office Areas Associated with the Four Corners (Routes 195/44) Planned Business Area

Four distinct areas bordering the Four Corners Planned Business area have been designated as Professional Office areas. Some of these areas have been specifically redesignated from a 1982 general business classification due to physical characteristics and to help minimize potential traffic and environmental impacts and possible incompatibility with neighboring residential uses. Some of the properties in these Professional Office areas are currently zoned for planned business uses, and a rezoning to a professional office zone should be considered upon approval of this Plan of Development. The four Professional Office areas in this commercial area are situated:

A. immediately north and east of Route 195, from the Eagleville Fire Station to open space areas associated with Cedar Swamp;
B. along both sides of Route 44, immediately east of the designated Four Corners Planned Business area;
C. along the northerly side of Route 44, immediately west of the designated Four Corners Planned Business area; and
D. land situated along the southerly side of Route 44, east of the Centerbank property, including an existing residence at 1645 Storrs Road, but excluding the Exxon Service Station at the corner of Routes 195 and 44

All development proposals in these Professional Office areas must be reviewed carefully for potential traffic, environmental and neighborhood impact problems. Shared accessways should be considered for all development projects, particularly for the property between the Centerbank and Exxon sites, where access appears possible without additional curb cuts onto Route 44. All development in these areas should consider potential impacts on historic and archaeological resources. Wherever possible, existing historic or architecturally significant structures within these designated Professional Office areas shall be preserved in association with a development or reuse proposal. It also is noted that an existing residence located on Route 195, immediately south of the Exxon service station has been included in a Professional Office classification. This designation is based on its proximity to commercially used land and the busy Four Corners intersection. A low-intensity office use of this property can serve as an appropriate transitional use between the Exxon service station and residential properties along Route 195. Due to traffic safety and sanitary concerns, this property is not considered suitable for more intense office uses, such as a doctor's office.

4. Professional Office Area Associated with the Mansfield Center Planned Business Area

Properties between the Mansfield Center Post Office and Cemetery Road have been designated as a Professional Office area. This area is currently zoned for neighborhood business uses, and a rezoning to Professional Office should be considered upon approval of this Plan of Development. This district currently is occupied by a number of multi-family housing units that have been created through a conversion of larger houses. Future reuse of these existing structures with office uses is expected to result in less traffic and environmental impact than a reuse with retail and service operations. Utilization of a Professional Office, rather than residential, classification

for these properties will promote the Town's ability to regulate, through a design review special permit process, any proposed alterations of use. Wherever possible, these multi-family structures, some of which are historically significant, shall be preserved in association with any development or reuse proposal. The depth of this designated Professional Office area extends easterly 300 feet from Route 195 and any proposed easterly extension of this area could present environmental and neighborhood compatibility problems.

E. COMMERCIAL USES IN OTHER LOCATIONS

1. Research and Development Park District

Within the designated Research and Development Park district, a number of commercial uses are considered acceptable. Permissible uses include a hotel conference center with associated restaurant and small-scale retail services; professional offices, child care facilities, recreational facilities and printing and reproduction services. Retail shopping centers are not considered appropriate uses in the Research and Development Park district.

2. Industrial Park District

In addition to the commercial uses noted above in the Research and Development Park district, certain commercial uses which may be incompatible with retail uses or have large space requirements may, under specific site plan or special permit standards, be allowed in the Town's Industrial Park zone. To promote the commercial objective of concentrating retail shopping patterns in town, most retail services should not be allowed within the Industrial Park zone.

3. Non-conforming Uses

A number of existing commercial uses are not situated in recommended commercial or industrial districts. The intent of this Plan of Development is not to terminate those non-conforming uses, but to indicate clearly that the subject areas are not appropriate for increased commercial development. Any proposed alteration of a commercial non-conformity should be reviewed under stringent special permit criteria that protect neighboring residential areas, protect the physical environment, protect historic resources and promote the goals of this Master Plan.

It should be pointed out that this Plan does not include a Commercial designation for Eagleville. This recommendation is based on the roadway alignments in this area; the significant number of small lots with highway frontage, which, if converted to commercial use, could create traffic problems; the topography of the area; and the nature of existing commercial uses which can continue to serve neighborhood commercial needs as non-conforming uses. If highway improvements are undertaken in this area, this commercial designation may be reassessed.

Most other commercial non-conformities in Town precede this Plan of Development and were the result of previous zoning provisions which authorized certain commercial uses in residential zones as special permit uses or uses established prior to the enactment of zoning.

4. Home Occupations

This Plan of Development also recognizes the importance of home occupations as a means to initiate businesses and provide valuable services to Mansfield residents. To protect neighboring properties, home occupations clearly must be secondary to the use of a site for residential purposes. Permitted home occupation uses must be clearly delineated within the Zoning Regulations and, except for a small identity sign, there should not be any exterior indication

of the use. Any service authorized as a home occupation use must be provided directly by a resident of the subject property.

To minimize nuisance and safety problems, home occupation uses should be limited in size through square footage and employee restrictions, should have adequate off-street parking, and should not generate traffic patterns that will alter the residential character of the subject premises and neighborhood. In addition, the use must not cause any environmental problems, health problems or objectionable noise, vibration, smoke, odor or electrical interference. Home occupations should be limited to: office uses; small instructional classes and workshops in art and craft endeavors; the onsite preparation and sale of products customarily produced in the home or garden, such as baking, home preserves, and sewing; and assembly and repair workshops of skilled craftsmen. Any sale of goods should be restricted to protect a neighborhood's character. Restaurants, eating and drinking places, kennels, animal hospitals and automotive repair and services are some examples of inappropriate home occupation uses.

5. Agricultural Uses

This Plan of Development supports the preservation of existing and potential farmland and forest land and encourages the production and sales of agricultural, horticultural and silvicultural products. Land use policies and permitted use provisions should encourage self-sustaining farms for individual property owners in most areas of town. The onsite sale of products grown or produced on property a farmer owns or leases, including pick-your-own sales operations, should be permitted by right, subject to compliance with necessary health and safety standards and utilization of best management practices. Efforts should be made to minimize noise and nuisance problems for nearby property owners.

VIII, INDUSTRIAL LAND USE

A. General

Although a number of mill-oriented industrial uses once existed in Mansfield, currently there are few or no industrial uses in town. The only land uses that could be classified as industrial are an automotive salvage and parts business on Route 32, a sand and gravel processing operation on Route 32 and a number of existing sand and gravel removal operations at various locations in town. Although no noteworthy industrial developments have occurred recently, there is potential for light industrial development in two areas of Mansfield. In Storrs, the University of Connecticut Educational Properties, Inc. (UCEPI) is actively pursuing plans for a research and development park, to be situated immediately north of the University campus. In southern Mansfield, municipal water and sewer service is available to land currently zoned for Industrial Park development. If the present section of Route 6 through southern Mansfield is connected to the interstate highway system, this land will become increasingly viable as a site for industrial and commercial developments. This Master Plan encourages a carefully planned development of these two areas, which are depicted on the Overall Plan of Development Map included in the Appendix of this Plan. With noted exceptions for the existing non-conforming automotive salvage and sand and gravel processing uses noted above and for extraction operations as special permit uses, industrial uses in other sections of town are not considered appropriate.

In determining that the aforementioned locations in Storrs and southern Mansfield are appropriate for new industrial development, the Planning and Zoning Commission considered numerous factors, including: availability of utilities, particularly water and sewer service; highway access near regional routes; and site size and physical characteristics. With proper provisions regulating permitted uses and specific development plans, the recommended locations have the potential to provide, with minimal compatibility problems, significant economic benefits to the Town through a broader tax base and new employment opportunities. Within industrially-zoned areas, permitted use provisions and appropriate performance standards must eliminate industrial uses which would create excessive noise, nuisance, health or safety problems to neighboring properties, demand excessive water supplies or sanitary treatment requirements or damage natural resource systems, including aquifers. All industrial developments should be of a scale and design to be compatible with neighboring land uses. Landscape buffers and other measures shall be incorporated to minimize impacts on nearby residential properties. In addition, all industrial developments should be designed to promote public transportation and non-motorized access. Plans should include bus stops, bicycle racks and lockers, sidewalks and other measures to promote alternatives to automobile access. Coordinated industrial park developments off internal roads should be encouraged through the Town's regulatory provisions. Smaller lot sizes and reduced frontages for lots off new internal roadways should be considered as incentives. Office uses should be considered adjacent to residentially zoned properties to help minimize potential impacts.

B. Connecticut Technology Park Project

The potential for a research and development park adjacent to the University of Connecticut's Storrs campus was recognized and supported in Mansfield's 1971 and 1982 Plans of Development. In 1982, the State of Connecticut established a non-profit development corporation, University of Connecticut Educational Properties, Inc. (UCEPI), to plan and develop a research park on State land adjacent to the University. In 1983, a private developer was hired by UCEPI to formulate and implement a master plan for the Connecticut Technology Park.

In 1984, the Planning and Zoning Commission amended the Permitted Use section of the Zoning Regulations to create a new "Research and Development/Limited Industrial" (RD/LI) zone classification with a restricted number of permitted uses. Additionally, related application, approval criteria and performance standards provisions of the Zoning Regulations were amended to ensure that all proposed RD/LI uses were regulated thoroughly. In 1986, 390 acres of State-owned land between the UConn campus, Route 44 and Route 195 were rezoned RD/LI. In 1988, the Planning and Zoning Commission approved plans for roadways in the Connecticut Technology Park, and the State of Connecticut built the southern portion of the roadway designed to connect the UConn campus with Route 44. In 1987, plans for a 42,000 sq.ft. office/research and development building were approved; in 1989, a 31,000 sq.ft. office research and development building was approved, and, in 1990, and 85-room hotel/conference center/restaurant building was approved. None of these buildings have been constructed. Due to a lack of progress and a related contractual dispute, UCEPI terminated its relationship with the private developer in 1990.

Although progress on this research and development park project has been slow, recent actions indicate that this project will advance in the next decade. The State Legislature has approved funds to complete the roadway link between Route 44 and the campus and to update utility plans for the project. The completion of this roadway is expected in 1994. In 1991, UCEPI was awarded a Federal planning grant for a "technology institute" within the research park, and in 1992 the Federal government approved 10 million dollars as a fifty percent share of the construction cost of the technology center. UCEPI officials have expressed optimism that the State will fund the required fifty percent share of construction costs and that a high-quality technology center building will be constructed by 1994.

Based on an understanding that most uses within this research and development park will be subject to local taxation and land use regulations, this Plan of Development continues to support the Connecticut Technology Park project. A successful research and development park will enhance the academic reputation of the University of Connecticut, promote State efforts to stimulate high technology development in Connecticut and provide direct and indirect economic benefits to the Town of Mansfield. Jobs will be created for University personnel; students and residents of the Mansfield area. Non-governmental uses within this development will be required to meet local land use regulations, and existing land use controls are designed to address potential land use impacts. The subject site is to be served by University of Connecticut sewer and water supply facilities and site characteristics provide suitable flexibility to locate roadways, buildings and other site improvements with minimal

impacts on the environment or neighboring residential uses. It is recognized that the Connecticut Technology Park project will have some traffic impacts. However, through careful design and a concerted effort to promote public transportation, car pooling and bicycle and pedestrian access, transportation impacts can be addressed in an acceptable manner. Development plans should include bus stops, bicycle racks and lockers, sidewalks and other measures to promote alternatives to automobile access. Permitted use provisions should emphasize research and development and high-technology operations requiring a high degree of scientific input and uses that are compatible with a research park environment. Any manufacturing uses should be limited in size and directly associated with a research and development/high-technology use. Expansionsof manufacturing operations should take place in other locations such as Mansfield's designated Industrial Park district. In addition, permitted land uses should be of a scale and design to be compatible with neighboring uses. Landscape buffers and other measures shall be incorporated to minimize impacts on nearby residential properties. Office uses should be considered adjacent to residentially zoned areas to help minimize potential impacts. Land use impacts will be phased in over a number of years, as it is expected that this research and development park will take decades to develop fully.

C. Industrial Park Area in Southern Mansfield

Approximately 170 acres of privately-owned land in southern Mansfield between Pleasant Valley Road Route 6 currently are zoned for industrial park usage. This area is adjacent to municipal water and sewer lines and near a Route 6 interchange. Although the property includes an aquifer area and some inland wetland soils, it does have adequate areas physically suited for light industrial and office uses. Nearby residential uses can be buffered through appropriate site design and landscaping. This area is located near skilled labor sources and it could benefit from the proximity of the University of Connecticut and Eastern Connecticut State University. This land use designation is consistent with the planning recommendations of the Windham Regional Planning Agency and the State's Conservation and Development Policies Plan. It is one of the few industrial areas in the Windham Region with sewer and water service.

During the 1970's, this industrial park zone was studied extensively by the Mansfield Economic Development Commission, engineering consultants and the Eastern Connecticut Environmental Review Team. Based on these reports and recommendations and a desire for a more balanced municipal tax base, the Planning and Zoning Commission has concluded that properly regulated light industrial and selective commercial use (see commercial section of this Plan of Development) of this area is in the long-term interest of the Town of Mansfield. Single-family homes would not be suitable uses in this area, but some future multi-family development might be appropriate as a transitional land use (see the residential section of this Plan).

Although the short-term development potential for this industrial park area is uncertain, the designation of an ample area for future economic development and balanced growth in town is considered essential to the Town's fiscal stability. It should be noted that a referendum to authorize the Town to finance utility and roadway construction for Town development of this industrial park area was defeated in 1978. This action is considered to be the result of resident unwillingness to finance the specific project; the national, State and local economic climate; the uncertainty of a highway link to the interstate system, and the lack of any firm commitment to the park. Sewer and water service remain available, and the completion of a Route 6 expressway to the interstate highway system remains a high priority for the State Department of Transportation.

It is important to note that, in the summer of 1992, a 70-acre tract of industrially-zoned land was sold to the State of Connecticut for use by Eastern Connecticut State University. This parcel is located west of Mansfield City Rd. and immediately north of Route 6 and the Mansfield City Rd./Route 6 Interchange. Officials from Eastern Connecticut State University have related that the parcel will be used for recreational purposes and that vehicular and utility access to abutting industrially-zoned land will be allowed. In addition, Eastern officials have stated that any development plans for their land will be reviewed with Mansfield officials and neighboring property owners and that potential neighborhood impacts will be considered. Due to the location of this 70-acre parcel, it is essential that Town officials monitor Eastern's construction plans for this site with respect to potential impacts on neighboring residents and the potential development of adjacent industrial land.

Due to its soil characteristics, much of the land in this industrial area currently is used, or could be used for agricultural purposes. This area also abuts actively utilized agricultural land north of Pleasant Valley Road. In recommending this area for industrial use, the loss of agricultural land has been considered carefully. It is the Commission's hope that regulatory provisions can encourage the retention of agricultural productivity for as long as possible. For example, a clustering of new industrial uses could help to preserve agricultural areas that are interspersed within an industrial park setting. To reduce the overall impact on the Town's inventory of agricultural land, any plans to extend the industrial zoning north of Pleasant Valley Road should be considered inconsistent with this Plan of Development.

In addition to this area's agricultural attributes, a number of other important physical conditions must be considered in establishing permitted use provisions and regulating proposed development plans. As noted in the Eastern Connecticut Environmental Review Team's June, 1974 report on this area: "Any installation of industrial use should be based on sound engineering and land use planning. Preservation and management of the wetlands and some wooded areas will enhance the aesthetic quality of the site and future development, benefit the wildlife habitat, and serve as a buffer from surrounding areas."

This industrial park area is underlain by a stratified drift aquifer and has potential as a future source of potable water, due to its hydrogeologic characteristics. All proposed uses, therefore, should be scrutinized, appropriately regulated, and monitored to prevent ground water contamination problems. Permitted use provisions of the Zoning Regulations should be reviewed to eliminate uses considered incompatible with aquifer protection in this sewered area. A coordinated development of this industrial park area should be encouraged to minimize potential land use impacts. Ideally, the entire acreage would be planned and developed by one or two developers, and traffic would be oriented to the area adjacent to the Route 6 interchange. Privately financed improvements to Town roads that serve as accessways to industrial uses may be necessary as part of a developer's project costs. Developments within this industrial park area should be of a scale and design to be compatible with neighboring land uses. Office and possibly multi-family housing uses should be considered along residentially zoned property lines and landscape buffers and other measures to minimize impact should be incorporated into submitted plans. In addition, new developments should be designed to promote public transportation and non-motored access. All development plans should include bus stops, bicycle racks and lockers, sidewalks and other measures to promote alternatives to automobile access.

IX, GOVERNMENTAL LAND USE

A. State and Federally-Owned Land

1) General

All land uses involving public land or public buildings have a significant effect on the Town's physical, economic and social character, and, therefore, should be consistent with the land use policies and goals established in this Plan of Development. Proprietary uses of State or Federal land are considered under the direct jurisdiction of the Town and must comply with all applicable land use regulations. Potential impacts from land uses on public land are particularly significant in Mansfield, due to the large amount of land owned by the State of Connecticut and the Federal government. Within Mansfield's borders, approximately 4,000 acres of land (exclusive of roadways), or 15 percent of the Town's total area are owned by the State of Connecticut. A majority of the State land is located near Route 195 between Routes 44 and 275 and constitutes the core campus of the University of Connecticut. Approximately 1,000 acres of State-owned land is situated near the junction of Routes 32 and 44, on property formerly utilized as the Mansfield Training School. Approximately 70 acres of land on Mansfield City Road are under the control of Eastern Connecticut State University. The Federal government owns approximately 1,700 acres of land in southeastern Mansfield associated with the Mansfield Hollow Dam Flood Control Facilities. All State and Feerally-owned land is depicted on the Government-owned Property Map included in the Appendix to this Plan.

This Plan of Development classifies State and Federal land based on location, existing use, physical characteristics and neighboring land uses. All State or Federal property has not been assigned an institutional land use category strictly on the basis of ownership status. This approach is consistent with Mansfield's 1982 Plan of Development and State and regional land use plans.

2) University of Connecticut

The location and activities of the University of Connecticut significantly influence the quality of life in Mansfield. The University is the Town's major employer and it provides extensive education, cultural and recreational benefits to Mansfield residents. The Town's housing market, transportation patterns and local economy are associated directly with the University's operations. The University's provision of fire, police, transit and Public Works services, including water and sewer facilities to the Storrs campus area affect the delivery of Town services. Although the University's operations are largely autonomous, there are many existing and potential interrelations with the Town of Mansfield that warrant extensive communication and mutual action. If the Town and University are to prosper jointly, it is essential that officials from both organizations work closely together to address common needs and concerns and non-educational or quasi-educational developments having Townwide implications. Current housing and sanitary waste disposal issues in the vicinity of the Storrs campus can best be resolved with cooperative solutions. Any major UConn-related developments, such as the proposed Connecticut Technology Park project, will impact Mansfield residents and

must be reviewed mutually to protect the best interests of the Town and the University. This Plan of Development classifies the Storrs campus area of the University of Connecticut in an Institutional Mixed Use category.

3) Eastern Connecticut State University

In 1992, approximately seventy (70) acres of land in southern Mansfield was purchased by the State for use by Eastern Connecticut State University. This land is located west of Mansfield City Road and is immediately north of Route 6. The property is adjacent to vacant land zoned for Industrial Park use and abuts residential uses on the easterly side of Mansfield City Road. State officials have related that the subject property will be used for recreational purposes in conjunction with the implementation of a plan to utilize existing ball field areas on the University campus. Eastern's campus area is situated in Windham, approximately one-half mile south of the 70-acre Mansfield property. It is important to note that Eastern officials have related that they will incorporate vehicular and utility access to adjacent industrially zoned property into the future development plans for their site. Eastern officials also pledged to work with Town officials and neighboring property owners to address potential land use impacts that could arise in association with future development plans.

This Plan classifies as "institutional" the Mansfield City Road property under Eastern Connecticut State University's control. To help protect neighboring residential uses from potential noise, lighting, traffic and nuisance impacts and to ensure promised access to adjacent industrial property, it is essential that Town officials closely monitor Eastern's plans for their Mansfield City Road property. Close communication between Mansfield and Eastern officials will be necessary to address land use and neighborhood impact issues suitably.

4) Mansfield Training School Property

In 1982, there was little indication that the State would significantly alter the Department of Mental Retardation's operations at the Mansfield Training School. This facility utilized 96 buildings and about 900,000 square feet of floor space on approximately 1,000 acres of land in northwestern Mansfield. At its operational peak, in the 1960's, the Mansfield Training School housed over 1,800 persons. However, since 1982, the State decided to close the facility and address the needs of individuals with developmental disabilities in other locations. By the end of 1992, the Department of Mental Retardation expects to terminate its operations on the Mansfield Training School property, except for two group homes on Route 32.

In 1987, the State Department of Corrections obtained approval to utilize four buildings on the northern side of Route 44 for a 350-bed minimum security prison and training academy for corrections officials. In an effort to plan and coordinate the reuse of other Mansfield Training School buildings and land, a Governor's Task Force was established in 1988. The task force finalized a report in April, 1990 which included recommendations to preserve agricultural land under the control of the University of Connecticut; to preserve open space/recreation land under the control of the State Department of Environmental Protection; for reuse of existing buildings by the University of Connecticut, Town of Mansfield (portion of Longley School) and other State

agencies; and to formulate a Master Plan for housing and related commercial development for portions of vacant land in the vicinity of Routes 32 and 44. In 1991, a consultant was hired by the State to prepare, in coordination with State and Mansfield officials, a Master Plan for housing and commercial land uses within a study area of 270 acres of land. A May, 1992 draft Master Plan, which is currently undergoing an independent environmental assessment depicts 375 housing units and 88,000 square feet of commercial space within three distinct development phases. The Master Plan, which is expected to be completed in 1993, will establish a longterm framework for the coordinated design and development of identified undeveloped land which can be served by existing public sewer and water systems.

The creative reuse and development of buildings and property previously associated with the Mansfield Training School is supported by this Plan of Development. An implementation of the 1990 Task Force recommendations in conjunction with a coordinated Master Plan for housing and related commercial development will address many of this Plan's natural resource, residential, commercial and open space/recreational goals and objectives. The subject area is served by public utilities and State highways, and the development of a new higher-density village center will help promote public transportation opportunities and an energy-efficient pattern of land use. The Town of Mansfield must work closely with State officials to implement the recommendations of the 1990 Task Force report and the anticipated recommendations of the housing and related commercial development Master Plan.

This Plan of Development classifies the area utilized by the State Department of Corrections and the upper campus area of the former Mansfield Training School (south of Route 44, west of Bone Mill Road) as an Institutional Mixed Use category. Lands to the north and west of this Institutional category are classified within Open Space Preservation categories or a new Design Residential/Commercial classification.

B. Municipal Land Use

1. Introduction - Listing of Town-owned Property

The major purpose of the section on municipal land use is to analyze existing community facilities which serve the Town's residents, to estimate future demands on these facilities and to propose courses of action to satisfy anticipated community demands. This chapter, and particularly the educational section, is influenced by many variables and, therefore, must be reanalyzed continuously and updated to ensure its responsiveness to resident needs and desires. Among the factors that must be monitored are: trends and forecasts in State and regional economics; shifts in State and Federal policies including mandated programs; birth rate fluctuations and the family characteristics of new residents; and regional approaches in handling municipal responsibilities. The following community facilities are reviewed in this Plan: education; fire; police; public works, including garage and solid waste disposal; library; Senior Center; municipal administration; cemetery uses; recreational facilities, and water and sewer utilities.

The following listing, with the exception of road rights-of-way, includes property owned by the Town of Mansfield as of April 1, 1993. (See Government-owned Property Map in the Appendix to this Plan.) The acreage figures, which are based on the Town Assessor's records, indicate that approximately 850 acres, or 3 percent of the Town's total area (28,350 acres), is municipally owned. This figure includes 370 acres acquired by the Town of Mansfield since May 1, 1982. Of this 370-acre total, 200 acres were acquired by the Town with funding assistance from the State or Federal governments; 89 acres were acquired through Mansfield's land use approval process; 60 acres were directly purchased and 20 acres were donated to the Town. In addition to municipally-owned land, 119 acres of land have been protected by conservation easements required by the Town's land use approval process (see Existing Preserved Open Space/Agricultural Land Map in the Appendix to this Plan).

TOWN-OWNED LAND

	Location	Acreage
Middle School	Spring Hill Road	25*
Northwest School	Hunting Lodge Road	11.8
Vinton School	Stafford Road (Rt. 32)	22.7
Southeast School	Warrenville Road (Rt. 89)	16.1
Audrey P. Beck Building (Town Hall)	So. Eagleville Road	5.4
Buchanan Center (Library)	Warrenville Road (Rt. 89)	4.1
Senior Center	Maple Road	1.9
Town Garage/Dog Pound	Clover Mill Road	20*
Transfer/Recycling Station	Warrenville Road (Rt. 89)	26.7
Eagleville Fire Station	Storrs Road (Rt. 195)	1
Education Maintenance Building (Reynolds School)	Depot Road	1
Old Town Hall (Historical Soc.)	Storrs Road (Rt. 195)	.7
Old Eagleville Schoolhouse	corner of Stafford Rd. (Rt. 32) and S. Eagleville Rd. (Rt. 275)	.7

Town-owned Land (continued)

	Location	Acreage
Childcare Center	Depot Road	14.6
Bicentennial Pond/Schoolhouse Brook Park	N. side of Clover Mill Road	170*
Schoolhouse Brook Park	So. side of Clover Mill Road	287
Sunny Acres Park	Meadowbrook Lane	6.5
Echo Lake	off Echo Road	13
Gifford Field	Spring Hill Road	16*
Shelter Falls Park	Birch/Hunting Lodge Roads	56.46
Merrow Meadow	Merrow Road	16
	Birchwood Heights Road	1.4
	Boulder Lane	6.3
	Cheney Drive	1.1
	Costello Circle	.9
	Crane Hill Road	1.2
	Deerfield Lane	17
	Davis Road	1.5
	Elizabeth Road	4
	Ellise Road	1.8
	Farmstead Road	2.1
	Fellen Road	.9
	Fieldstone Drive/Maple Road	27.4
	Highland Road	21.9
	Hillyndale Road	2.1
	Holly Drive	1.6
	Jacobs Hill Road	2.7
	Little Lane	1.9
	Lorraine Drive	2.1
	Mansfield City Rd./White Oak Rd.	30
	Russett Lane	.9
	Sawmill Brook Lane	13
	Storrs Rd. (so. of Cedar Swamp Rd.)	4
	Thomas Drive	5.5
	Thornbush Road	.9
	Woodmont Drive	1.7
	Westgate Lane	.9
	Total	856.0

Notes: 1) Two parcels owned by the Mansfield Housing Authority are not on this list.

2) Through a lease arrangement, the Town manages active recreational uses at the Lions Club fields off Wormwood Hill Rd.

* Portions of one 231-acre parcel

Conservation Easements as of April 1, 1993
(Land Protected with Written Agreements with the Town)

	Acreage
- Birch Rd./Hunting Lodge Rd. (Highbrook subdivision)	3.8
- Brookside Lane (Deer Ridge subdivision)	3
- Browns Rd. (southern portion Schoolhouse Brook Park)	4.5
- Conantville Rd. (Ledgebrook)	3
- Davis Rd. (Gifford Estates subdivision)	15
- Fieldstone Drive/Maple Rd. (Maplewoods subdivision)	13.8
- Highland Rd. (Laurel Ridge subdivision)	7
- Lorraine Dr. (Woodland Estates subdivision)	5
- Maple Rd. (Mapleview Farms subdivision)	11.5
- Maple Rd. (Nursing and Rehabilitation Center)	3
- Nipmuck Rd. (Fenton Valley subdivision)	.5
- South Eagleville Rd. (Mansfield Cooperatives project)	15.7
- South Eagleville Rd. (Crossing at Eagle Brook subdivision)	11.8
- Spring Hill Rd. (resubdivision of Gifford Estates lot 27)	2.9
- Storrs Rd. (Norling property)	7
- Warrenville Rd. (Roaring Brook subdivision)	1.8
- Wildwood Rd. (Nichols/Hepple property)	.5
- Woodland Rd. (Best subdivision)	5.2
- Wormwood Hill Rd. (Little Divide subdivision)	4
Total	119 acres

2. Educational Facilities

The major role of this Plan as it relates to educational land use is to review existing facilities with respect to current and anticipated pupil enrollments and population characteristics and, as necessary, to recommend locations for any needed facilities. The Planning and Zoning Commission is not attempting to analyze the quality or extent of educational programs and, therefore, has not addressed facility needs or desires related to program modifications. In addition, the Commission has not investigated internal structure needs as related to providing access to handicapped individuals or improving energy conservation.

Four municipally-owned schools (Mansfield Middle School, Southeast School, Goodwin School and Vinton School) and Mansfield/Ashford regionally-owned and managed (Region 19) E.O. Smith High School are utilized for Mansfield's educational programs. Some administrative offices for Mansfield's school system are located in the Audrey Beck Municipal Building and maintenance and storage facilities are located in the Reynolds School building on Depot Road. Additionally, in 1991, a new 120-student municipally-owned and operated childcare center was constructed on Depot Road. In 1986, E.O. Smith High School was renovated as part of its regionalization, and new athletic facilities were added. In 1991, expansion projects were completed for each of Mansfield's three elementary schools. During the last ten years, maintenance-oriented improvements were made at the Mansfield Middle School. Mansfield's educational facilities presently are considered to be in good physical

condition and are suitably located with respect to existing and anticipated population centers.

In the fall of 1991, 1,176 students were enrolled in Mansfield's elementary and Middle School facilities (687 students in the elementary schools; 489 students at the Middle School). An additional 420 Mansfield students were enrolled at E. O. Smith High School (out of a total enrollment of 766 students.) Precise forecasts are difficult in general and complicated in Mansfield, due to a high yearly student turnover directly associated with the presence of the University of Connecticut. Demographic information and school enrollment projections should continue to be updated annually and, if future data or policy decisions indicate the need for additional school facilities, locations in the western portion of Mansfield should be considered. Possible locations could include land previously associated with the Mansfield Training School. Based on current demographic information, it is expected that Mansfield's existing educational facilities have adequate capacity for the immediate future. However, by the end of this decade, some additional classroom space may be necessary at the Middle School. The adequacy of E.O. Smith High School's student capacity will be dependent upon policy decisions regarding the acceptance of students from towns other than Ashford and Mansfield.

3. Fire Protection Facilities

Mansfield residents are served by two (2) volunteer fire departments which have cooperative assistance agreements with fire departments in neighboring towns and the University of Connecticut's Fire Department. The Eagleville Fire Department, Inc. provides primary service to the northern, central and western sections of town and operates fire stations on Stafford Road (Rt. 32) near the junction of South Eagleville Rd., and on Storrs Road (Rt. 195) near the junction of Middle Turnpike (Rt. 44). The Mansfield Volunteer Fire Company, Inc. has primary coverage for central, southern and eastern sections of town and has a fire station on Storrs Road (Rt. 195), near Spring Hill Road. The Fire Departments, in conjunction with the Town's Public Works Department and Inland Wetland Agency, have identified and maintained accessible fire ponds throughout Mansfield. The Town's volunteer fire fighters have provided excellent service to the residents of Mansfield and should continue to be supported by the Town.

In 1983, Mansfield's Fire and Emergency Service Committee prepared a comprehensive Fire Master Plan Update. This study was further reviewed and presented with revisions to the Town Council on November 26, 1990. This study noted that approximately 90 percent of Mansfield's population is within a five-mile zone of a Town fire station and approximately 99 percent of the population is within a five-mile zone of a mutual aid fire station. This report, which is to be updated again in 1993, states that "current fire protection theories indicate that properties are protected if they are within a five mile zone..." This study concluded that "a new fire station is not needed at this time," but "if a fire station is built, it should be in the area of Storrs Road and Warrenville Road." Due to designated commercial, industrial and medium to high-density residential areas in southern Mansfield, a new fire station in the southern portion of town would be consistent with this Plan of Development. The need for an additional station should be reevaluated by the Fire

and Emergency Services Committee in 1993 and any site recommendations should be based on a comprehensive siting model and needs assessment study.

4. Police Facilities

Mansfield currently is served by four resident State Troopers, three full-time police constables and four part-time constables. As needed, assistance is provided by the State Police Department and the University of Connecticut police force. An administrative office for the Town's police services is located in the Audrey P. Beck Municipal Building. Unless policy changes require a significant increase in police services, no additional police facilities are deemed necessary at this time.

5. Town Garage

The Town's Public Works garage and materials storage yard are centrally located off Clover Mill Road. The site is buffered from residential areas and is amply sstorage yard are centrally located off Clover Mill Road. The site is buffered from residential areas and is amply sized to serve the Town's future needs. The garage was expanded in 1975 and a new 1,500 square foot grounds equipment storage building was constructed in 1986. Currently, the Clover Mill Road garage has three buildings totalling 17,136 square feet.

6. Solid Waste Disposal

Historically, Mansfield's residents have disposed of their solid wastes through open burning and landfilling activities. This practice was significantly altered in 1987, when the Town entered into a contract with the Town of Windham for the incineration of solid wastes at the Windham Energy Recovery Facility (WERF) on Route 6 in Windham. In 1990, Mansfield began a mandatory recycling program to reduce its disposable solid wastes. Currently, approximately nineteen tons of solid wastes per day are generated in town, exclusive of the solid wastes generated by the University of Connecticut. Of this nineteen-ton total, about two tons per day are bulky wastes deposited at Mansfield's landfill; about ten tons per day are disposed of at WERF, and about seven tons per day are recycled through Mansfield's recycling program. Excluding bulky wastes, about forty percent of the Town's household and commercial solid wastes currently are recycled.

Mansfield owns and operates a landfill on a 26.7-acre parcel of land situated on Warrenville Road (Route 89) in the southeastern section of town. The landfill site, which is buffered from residential properties, is located adjacent to the Fenton River and is within the watershed of the Willimantic Water Works Reservoir. Currently, the landfill site is utilized for the landfilling of bulky wastes; as a transfer station for receiving and transferring disposable solid wastes to the WERF facility, as a recycling depot, as a leaf-composting site and as an occasional household chemical waste transfer site. This property also is utilized for gravel and stone extraction, sand screening and material storage associated with the Town's Public Works operations. Mansfield's landfill also serves as an interim (ends October 1, 1993) backup landfill site for the Town's household and commercial solid wastes that are normally transported to the WERF plant. Approximately forty percent of Mansfield's single-family homes use this landfill site as a transfer station

and recycling center for all their solid wastes. Other residents utilize a curbside pickup and recycling program operated by private haulers under contract with the Town. The University of Connecticut independently manages the disposal of its solid wastes.

Mansfield's landfill operations are permitted by the State Department of Environmental Protection and, in 1991, a license was received from the Mansfield Inland Wetland Agency. Several monitoring wells have been installed between the landfill and the Fenton River. These wells, as well as river water, both upstream and downstream of the landfill area, are sampled quarterly. To date, water quality monitoring test results have been within acceptable limits. In the mid-1980's, a methane gas study on the landfill property was conducted. Monitoring tests for gas are conducted yearly, and an easement to prevent building on land immediately north of the landfill has been obtained. In the last decade, management practices for all activities at the landfill have improved and there currently is greater control over surface runoff and the potential movement of pollutants. Mansfield's current landfilling activities at the Route 89 site are conducted under a DEP-approved landfill closeout plan. Based on current activities, landfill capacity will be reached in approximately eight years.

Since 1982, Mansfield has taken significant steps to improve its disposal of solid wastes. The Town has established a good recycling record and the Town's Solid Waste Advisory Committee has continued to investigate alternatives to increase the amount of solid waste recycled. Alternatives to the WERF incineration plant are being considered, and steps have been taken to establish by 1994 a regional household chemical drop-off facility in Coventry. Due to the limited capacity authorized for the Route 89 landfill site, the Public Works Department has begun to investigate alternative bulky waste sites in town. Based on State requirements, all new landfill sites must be located outside of reservoir watersheds. This will require future Mansfield bulky waste sites to be located in the western half of town. Any new bulky waste sites in Mansfield must be acceptable with respect to potential environmental impacts, traffic impacts and neighborhood nuisance impacts.

In future years, it is anticipated that most solid waste disposal practices will be coordinated as part of a regional management approach. Through continued compliance with State and local permit requirements, and through a continuing policy of investigating and implementing best management policies, Mansfield has helped to reduce environmental impacts associated with solid waste disposal.

7. Library

Mansfield operates a public library in the Buchanan Center building on Warrenville Road (Rt. 89), in southeastern Mansfield. The Library was expanded and renovated in 1986, and approximately 3,000 square feet of area previously used for childcare services was incorporated into the Library functions. The Buchanan Center, which is over 11,000 square feet in size, includes a sixty by thirty-six foot auditorium which is utilized for Library programs and community functions. Libraries also are located at each public school and at the University of Connecticut. If additional Library space is deemed appropriate in the future, further expansion of the Buchanan Center appears possible.

8. Senior Center

Since 1980, the Town has been operating a Senior Center on Maple Road, near the junction with South Eagleville Road. The Center was expanded in the mid-1980's and currently has about 7,000 square feet of area, including kitchen facilities. The Center is located adjacent to approximately 150 units of elderly housing. The Senior Center provides social, educational and recreational opportunities for Mansfield's senior citizens. The use of this facility is expected to continue to increase, and future expansions or additional facilities at other locations may be considered appropriate.

9. Municipal Administration

In 1979, the Storrs Grammar School, located at the corner of Storrs and South Eagleville Roads, was converted into the Mansfield Municipal Building. During the 1980's, the facility was renamed the Audrey P. Beck Building. This building provides a centralized location for the Town's administrative functions and for most public meetings. The facility, which is about 27,000 square feet in size, is expected to fulfill the Town's need for municipal office space for the foreseeable future. Additional parking for this facility should be considered a short-term need.

10. Cemetery Uses

There are twenty-one known cemeteries in Mansfield. Most of the cemeteries are inactive, with little or no burial space. Five of the Town's cemeteries are active and have space available for the immediate future. Only two of the active cemeteries, the Gurley (Pink) Cemetery, at the junction of Bone Mill and Ravine Roads, and the New Mansfield Center Cemetery, on Cemetery Road, are owned and maintained by the Town of Mansfield. The Mansfield Cemetery Committee, in association with the Town's Public Works Department, maintains these two active cemeteries, as well as many inactive cemeteries located through the Town. The other three active cemeteries are privately owned and maintained, each by its own cemetery association. The three active private cemeteries are: The New Storrs Cemetery, on North Eagleville Road; Hillside, Cemetery, on Spring Hill Road, and a group of abutting cemeteries (B'nai Israel, Agudath Achim, Workman's Circle and Hillel), located at the junction of Routes 31 and 32. Mansfield's cemeteries are depicted on Map #3.

It is currently projected that all presently available cemetery space in Mansfield may be utilized by the mid-twenty-first century. While cemetery space is not considered an immediate problem, private cemetery associations are encouraged to review expansion potential and alternative sites. Town officials should consider land acquisition either to expand the Gurley (Pink) and New Mansfield Center cemeteries or to establish an alternative burial site for use when the Town-owned cemeteries reach capacity. Any new or expanded cemetery sites should include an undisturbed buffer zone between burial areas and abutting properties. Cemeteries are subject to State Health Code requirements and new or expanded cemeteries should be reviewed under special permit criteria.

Cemeteries are considered a low-intensity use and are suitable in low to medium-density residential areas, low-density residential and conservation

residential districts. Except as an expansion of an existing cemetery, this use is not considered appropriate in commercial or industrial districts or medium to high-density districts.

11. Recreational Facilities

a) General

One important measure of a community's attractiveness is the nature of its recreational facilities and its ability to provide active as well as passive recreational opportunities for all age groups. Organized recreation programs facilitate the formation of new relationships while providing for improved physical fitness and/or the acquistion of useful skills. Hiking trails and public access to water bodies, historic and scenic sites and unique natural areas promote individualized relaxation and educational opportunities. Townwide parks, such as Mansfield's School House Brook Park, which has provisions for active as well as passive recreation, provide family meeting places that encourage community identity and new friendships. Fortunately, within Mansfield's borders, a variety of recreational opportunities now exists.

This Plan recognizes the importance of effectively managing the use of all existing recreational facilities and includes recommendations for addressing recreational needs in the future. Policy decisions regarding existing and future recreational programs are the primary responsibility of the Town Council, Recreation Advisory Committee and Parks Advisory Committee. Information and recommendations contained within this Plan of Development are designed to assist Town officials and residents with future decisions involving recreational facilities. Many of the recommendations should be considered for direct incorporation into the Town's five-year Capital Improvements Program, which is updated annually. Within the Open Space chapter of this Plan, information is provided regarding Mansfield's existing and proposed open space areas. An important goal of this Plan is the linkage of open space corridors and recreational facilities through a comprehensive Townwide trail system.

b) Existing Recreational Facilities

Most of Mansfield's current recreational programs, which are administered by either the Town's Recreation Director or Social Services Director (programs for the elderly), utilize municipal buildings and property. However, Federal, State and privately owned lands also have an important role in providing recreational opportunities for Mansfield residents. The Federally-owned Mansfield Hollow Dam property in southeastern Mansfield includes fishing, boating, hiking and picnicing opportunities. Approximately eighty acres of this Federal property currently is managed by the State as Mansfield Hollow Reservoir State Park. This State park includes a boat launch area, ball fields, picnic area, hiking trails and shoreline fishing access. Tennis courts, ball fields, an outdoor skating rink and indoor swimming pools at the University of Connecticut are at times available to Mansfield residents. Approximately twelve miles of the Nipmuck Trail system are located in Mansfield and an additional twelve miles of public hiking trails are located on properties owned and managed by Joshua's Tract Conservation and Historic Trust. Numerous sites along the Fenton, Mount Hope, Natchaug and Willimantic Rivers provide excellent fishing. Many sections of the Nipmuck Trail and many fishing access

points are on private property. In addition, a wide variety of recreational opportunities, including an active summer day camp program, are available at privately-owned Holiday Hill, on Chaffeeville Road.

Mansfield's existing recreational facilities include outdoor ball fields, tennis courts, basketball courts, hiking trails, indoor gyms, auditoriums and multi-use space at schools and other municipal buildings and an outdoor swimming area at Bicentennial Pond, which is part of Schoolhouse Brook Park. In addition, Mansfield owns numerous undeveloped open space/recreation parcels throughout the Town that were acquired through the Town's land use approval process. The following chart lists the specific recreational facilities available on municipally-owned or leased property. The list includes E.O. Smith High School, which is owned by Mansfield and Ashford as the Region 19 School District.

Existing Municipal Recreational Facilities/Sites

Site	Location	Facilities
Buchanan Center (Library)	Warrenville Rd.	- multi-use ball field - children's playscape - indoor auditorium
E.O. Smith High School (owned by Region 19)	Storrs Rd.	- multi-use ball fields including baseball and softball diamonds - outdoor track - 6 tennis courts - 2 outdoor basketball hoops - 2 indoor gyms - 1 indoor auditorium
Gifford Field	Spring Hill Rd.	- multi-use ball fields, including youth baseball diamond
Lions Club Park (leased by the Town)	Wormwood Hill Rd./Warrenville Rd.	- multi-use ball fields, including 2 full-size soccer fields
Merrow Meadow	Merrow Rd.	- fishing, canoeing access to Willimantic River
Mansfield Middle School	Spring Hill Rd.	- multi-use ball fields, including baseball and softball diamonds - 4 tennis courts - 4 outdoor basketball hoops - children's playground - indoor gym - indoor auditorium
Goodwin School	Hunting Lodge Rd.	- multi-use ball field - 4 outdoor basketball hoops - children's playscape

Sunny Acres	Meadowbrook Rd.	- indoor gym/auditorium.pm - multi-use ball field - 1 tennis court
Sunny Acres, (con't.)		- 2 outdoor basketball hoops
Senior Center	Maple Rd.	- multi-function room w/ kitchen
Shelter Falls Park	Birch/Hunting Lodge Rds.	- hiking trails (2 miles)
Southeast School	Warrenville Rd.	- multi-use ball fields with baseball diamond - 2 outdoor basketball hoops - children's playscape - indoor gym/auditorium
School House Brook Park (Bicentennial Pond)	Clover Mill Rd.	- beach area with bath house - fishing access - picnic pavilion - children's playscape - trail system with 19 marked trails covering 10.2 miles - trailside fitness stations
Vinton School	Stafford Rd.	- multi-use ball fields with baseball diamond - 4 outdoor basketball hoops - children's playscape - indoor gym/auditorium
Misc. Open Space / Recreational Parcels	throughout Mansfield	- undeveloped, but some parcels have trails and potential for more active recreation. See list of Town-owned land in Chapter II, Section B.1.

c) Recreational Recommendations

Since 1982, the total inventory and condition of Mansfield's recreational facilities has significantly improved. Ball fields have been added at Gifford Field and Lions Club Park and existing fields expanded at E.O. Smith High School and Northwest School. A new outdoor track and expanded tennis courts were constructed at E.O. Smith High School and new playscapes have been added at the Town's three elementary schools, the Buchanan Center, Sunny Acres Park and Schoolhouse Brook Park. The multi-function rooms at the Senior Center have been expanded and indoor gymnasiums at all of the Town's schools have been improved. Schoolhouse Brook Park has been expanded in acreage and many new miles of trail have been added. In the vicinity of Bicentennial Pond, a bath house and covered picnic pavilion has been constructed, exercise fitness stations have been added, and a paved path for handicapped access to the pond has been installed. Shelter Falls Park was established in northwestern Mansfield and a new trail system was created on land deeded to the Town as

part of the Laurel Ridge subdivision, off Highland Road in southwestern Mansfield. Merrow Meadow, donated to the Town by the Merrow family, provides additional public access to the Willimantic River and is currently being studied for use as part of a potential National Park Service greenway corridor. Many other open space/recreational parcels have been added to the Town's inventory for possible future development.

After considering Mansfield's existing facilities and program capacity with respect to existing program needs, population projections and anticipated needs and demands, the Planning and Zoning Commission has concluded that there are not critical recreational facility deficiencies, but that there are a number of land use-oriented recommendations that should be considered to ensure suitable recreational facilities in the future. The following listing of recommendations is considered compatible with the land use goals and objectives of this Plan of Development.

1. In conjunction with the open space objective of protecting streambelt corridors throughout the Town, it is recommended that the Town's existing trail system be protected and expanded. Specific trail-oriented priorities include:

   a. Protection of the existing Nipmuck Trail by acquiring ownership or written easement rights on private properties along this important inter-town trail system;

   b. The expansion of existing trails through linkages with other trails and linkages to public or land trust parcels. Such linkages should be evaluated in conjunction with all submitted land use proposals requiring PZC approval.

   c. The development of a new inter-town trail system along the Willimantic River, with linkages to the Nelson/Cedar Swamp Brook streambelt system and Shelter Falls Park, and to the Kidder/Saw Mill Brook streambelt system. Such a linkage should be considered as part of development plans for the Mansfield Training School property.

   d. The creation or extension of trail systems in eastern portions of Mansfield to access Cooney Rock, areas along the Mount Hope River and areas adjacent to Hansens Pond, McLaughlin Pond and Knowlton Pond;

   e. The acquisition of buffer areas (through ownership or conservation easement) adjacent to existing or proposed trails

2. Zoning and Subdivision regulations should be designed to require developers to address recreational needs in conjunction with new multi-family housing developments and new subdivisions. New projects should consider active amenities such as ball fields, playgrounds, swimming areas, tennis courts, basketball courts, trail systems (particularly to promote linkages with nearby parkland and trails), as well as picnic areas and more passive open space areas. The degree of recreational improvement should be directly associated with the size of the project. In multi-family housing developments, recreational facilities should be privately owned and maintained.

3. The Town should consider an expansion of its inventory of multi-use ball fields and playground areas, particularly in western Mansfield, where existing and anticipated population density is the highest. More specifically, consideration should be given to acquiring rights to use the lighted playing fields at Longley School (near the intersection of Bone Mill Road and Route 44); to establishing a new play field area in southwestern Mansfield; and expanding the playing fields at Southeast School and Lions Club Park. It also is important to emphasize that new construction projects should be designed to result in no net loss of existing ball field areas or recreational facilities.

4. Mansfield currently has limited auditorium and gymnasium space available for Town programs. The Town currently has no indoor swimming facilities. It is recommended that the Town work with the University of Connecticut to maximize the use of State facilities, and that the Town actively seek permanent right to utilize the auditorium and gymnasium facilities at Longley School on Middle Turnpike. Additional space in the Longley School building may be appropriate, to enhance opportunities.

5. Bicentennial Pond, in School House Brook Park, is an important component of the Town's recreation program. Improvements to increase water circulation within the pond have begun, and additional improvements have been designed. (All necessary circulation improvements should be completed as soon as possible.)

6. The recreational needs of the Town's elderly population will continue to grow. Recreational properties should be readily accessible to residents with physical handicaps and limited mobility. Recreational improvements, such as bocci ball and shuffleboard courts, which are readily usable by elderly citizens, should be considered.

7. Additional recreational access to the Willimantic River for fishing, canoeing and, possibly, swimming, should be considered. River access and improvements at Merrow Meadow and, possibly, another Willimantic River site in southern Mansfield should be considered, to promote active use of the river amenities. A detailed improvement plan with amenities for individuals with physical handicaps has been designed for the Merrow Meadow site.

8. Demand for tennis courts often exceeds current supply. Consideration should be given to providing user-fee-supported lighting at the Middle School and E.O. Smith tennis courts.

9. Bicycling provides many active recreational benefits. Signage and, possibly, safety improvements should be made to the Town's designated bicycle routes and along other roadways providing access to Town parks.

10. Gardening is an important recreational amenity for many indivduals. An existing community garden area on Route 195, north of the UConn campus on State-owned land, has been very popular. Consideration should be given to developing additional community garden space near the Senior Center on Maple Road, near the Mansfield Training School site, and in southwestern Mansfield.

11. Mansfield currently leases property off Wormwood Hill Road from the Lions Club for ball fields and park usage. The acquisition of permanent rights of usage or ownership interest should be considered for this increasingly important park area.

12. Other recreational improvements that would be considered compatible with this Plan of Development include: the creation of an outdoor bandshell (possibly at Schoolhouse Brook Park or the former Mansfield Training School property); the creation of outdoor skating areas; the creation of outdoor camping areas (possible at Lions Club Park or Schoolhouse Brook Park); the development of a playscape at the Mansfield Discovery Childcare Center on Depot Road; the construction of an indoor pool (possibly on the Middle School property), and the addition of an outdoor swimming area.

13. All active recreational facilities should provide buffering from nearby residences and provide adequate parking areas.

C. Public Utilities - Water and Sewer Services

1. Water Supply Services

a) General

Water supply services for Mansfield residences and businesses currently are provided by two major public systems and numerous private systems. The major water supply systems in town are owned and operated by the University of Connecticut and the Willimantic Water Works. The Town of Mansfield does not operate a water supply system, but is responsible for maintaining water lines serving the Town's Senior Center and elderly housing units located near the intersection of Maple and South Eagleville Roads and a water line serving the Town's child care center on Depot Road. Most of the Town's existing household population relies on individual onsite wells for its potable water. No major expansions of the University of Connecticut or Willimantic Water Works systems are expected and, therefore, the Town will continue to depend on the UConn and Willimantic Water Works systems and individual wells for future water supplies. It is, therefore, essential that land use policies protect surface and ground water quality throughout the Town, and, in particular, aquifer areas serving UConn well fields and the Willimantic Reservoir drainage basin. Chapter V of this Plan provides more information and recommendations regarding surface and ground water protection. It is also important to note that the formation of new privately-owned community water supply systems should be discouraged unless managed by the Windham Water Commission/Willimantic Water Works because these systems could result in installation, maintenance and monitoring problems and the potential need for municipal involvement.

b) University of Connecticut Water Supply System

The University of Connecticut Water Supply System, which serves UConn's Storrs campus area, as well as land formerly associated with the Mansfield Training School, utilizes well fields along the Willimantic River (west of Route 32, between Route 44 and Merrow Road) and along the Fenton River (north of Gurleyville Road). In 1990, University officials prepared a Water Supply Plan for review by the State Department of Health Services. This plan details the UConn system, which served 18,000 equivalent full-time users in 1987, and is projected to expand to 21,500 equivalent full-time users by the year 2000. UConn's Water Supply Plan reports the need for an additional well in the Willimantic well field and a continuing program of system maintenance and distribution line upgrading. This study reports that, in general, most of the distribution system is considered to be in "good" condition and that there are no indications of contamination and no "trend of deterioration." Mansfield officials have recorded their support of UConn's proposed water system improvements.

Expansions of the UConn water supply system to serve the Connecticut Technology Park project, identified Townwide commercial areas and land previously associated with the Mansfield Training School would promote Plan of Development objectives and should be supported. Water supply service to designated medium to high-density areas abutting the UConn campus also would be consistent with this Plan. Expansions of water supply services to areas with commercial and higher-density housing would enhance fire protection

services and would help address existing and potential ground water quality problems. Water supply extensions should be coordinated with potential sewer service and service expansions to individual projects generally should be financed by the system's users. Some municipal support may be warranted for comprehensive programs that address an identified water quality need or will help strengthen the Town's non-residential tax base.

An important component of this Plan of Development is the protection of the drainage basin and aquifer areas for UConn's Willimantic and Fenton River well fields. As Mansfield's designated aquifer protection agency, the Planning and Zoning Commission is committed to the comprehensive regulation of all land use activities within these well field areas. Accordingly, identified well field aquifer areas which are unsewered should be zoned for low-density residential land uses and all regulatory standards, including permitted use provisions, application submission requirements and approval criteria should be reviewed and, as necessary, revised to help protect UConn's water supply well fields. Related goals and objectives regarding ground water and aquifer protection are contained in Chapter V, subsection F of this Plan of Development.

c) Willimantic Water Works Water Supply System

The Willimantic Water Works water supply system serves 25,000 persons, primarily in the town of Windham, but including portions of southern Mansfield. This system relies on the Willimantic Reservoir as its source of water. The Reservoir, which is 80 acres in size, is located on the Mansfield/Windham Town Line, east of Route 195 in southern Mansfield. Approximately 23 square miles, or about one-half of Mansfield's land area is situated within the Reservoir watershed. In conjunction with a State-required Water Supply Plan, the Windham Regional Planning Agency prepared a March, 1989 "Willimantic Reservoir Watershed Protection Study." This study inventories land uses within the reservoir drainage basin and provides recommendations for protecting surface and ground water quality within the reservoir watershed. The Willimantic Water Works System has a projected safe yield of 7.9 million gallons per day, and currently utilizes about 2.5 million gallons per day. Protection of the reservoir watershed will help ensure a good supply of potable water for residents and commercial users in Windham, Mansfield and, potentially, other towns in this region. Within Mansfield, extensions of the water supply system are appropriate for designated industrial and commercial zones, medium to high-density residential areas and for any nearby area with water quality or quantity problems. Major expansions of the Willimantic Water Works system are not anticipated. Water supply extensions should be coordinated with potential sewer service and service expansions to individual projects generally should be financed by the systems users.

As detailed in Chapter V, subsection G. of this Plan of Development, protection of the entire Willimantic Reservoir Watershed, is an important component of this Plan. It is recommended that, except for areas served by public water and sewer systems, undeveloped areas of the entire reservoir watershed should be zoned for low-density residential uses at a maximum density of one dwelling unit per two acres of land. Additionally, all existing and proposed land uses, particularly commercial uses and those considered high risks by the State Dep't. of Environmental Protection and Windham Regional Planning Agency publications, should be strictly regulated and

monitored to help prevent pollution problems. Related recommendations are contained or referenced in Chapter V, subsection G. of this Plan.

2. Sanitary Waste Services

a) General

Although the Town of Mansfield does not own or operate a sewage treatment facility, sewer service is provided to a number of Mansfield residents and commercial uses through public systems operated by the University of Connecticut and the Town of Windham. In addition, the State Public Works Department is operating, on an interim basis, a sewer system serving land and buildings previously associated with the Mansfield Training School. Most of Mansfield's households are served by individual septic tank/leaching field systems.

Since 1982, Mansfield officials have worked closely with the State Dep't. of Environmental Protection to identify and study land uses with existing or potential sanitary waste disposal problems. All of the Town's commercial, multi-family housing and municipal buildings with onsite septic systems and numerous areas with higher concentrations of housing units with onsite systems, such as Eagleville and Gurleyville villages and the Highland Road area, were studied. Mansfield's findings and recommendations, including a follow-up monitoring program, are contained in a 201 Facilities Plan revised to Septem ber, 1991. This plan, which has been approved by the State DEP, concluded that all potential problem areas, with two exceptions, can acceptably address potential sanitary waste disposal problems with onsite solutions. The noted exceptions, Knollwood Acres multi-family development on South Eagleville Road and the Orchard Acres multi-family development on Cheney Drive, cannot solve potential sanitary problems onsite and will have to be connected to the University of Connecticut sewer treatment system. The University has agreed to allow future sanitary service to these apartment developments.

Among all local public works projects, sewer facilities have the greatest potential for influencing developmental patterns and the future character of a municipality. Therefore, it is essential that all proposals for extending sewer facilities be consistent with the land use recommendations contained in this Master Plan. Carefully planned sewer service expansions can facilitate energy and cost-efficient concentrations of commercial, industrial and residential development and promote a desired rural residential environment in remaining areas of town.

Limited expansions of existing sewer service systems in southern Mansfield, in Storrs, in the vicinity of the UConn campus and Connecticut Technology Park site and in an area near the intersection of Routes 32 and 44 would be considered consistent with this Plan of Development. Remaining areas of town should not be sewered, and existing and future land uses should rely on onsite disposal systems. This Plan recommends that the use of community septic systems or other onsite systems that safely process sanitary wastes be studied again jointly by the Water Pollution Control Authority and the PZC. (In 1987, the WPCA determined that community septic systems should not be authorized for new developments in Mansfield.) If onsite systems serving more than one dwelling are authorized, specific provisions to ensure effective

maintenance and management by the private owners must be incorporated to protect public interests. Wherever possible, public water facilities should accompany expansions of sewer service. Sewer service expansions to individual projects should be financed by the systems users, but some municipal support may be warranted for comprehensive development programs that will strengthen the Town's economic base and serve an identified geographic area. Recommended land uses within proposed sewer service areas are discussed in the residential, commercial and industrial sections of this Plan.

b) University of Connecticut Sewage System

The University of Connecticut's sewage treatment system serves the UConn campus area, including a number of private property owners, E.O. Smith High School, the Audrey Beck Municipal Building and the Town's Senior Center on Maple Road. UConn's treatment facilities are located off North Eagleville Road and the system discharges treated effluent into the Willimantic River immediately below the Eagleville Dam. The Town of Mansfield owns and main tains a pump station on South Eagleville Road and those sewer lines which serve the Senior Center and nearby elderly housing units near the intersection of Maple and South Eagleville Roads. Private property owners on a number of local streets also are served by the UConn sewer system, but the Town is not involved with operation and maintenance costs. In addition to the roadways on the UConn campus, portions or all of the following streets in Storrs have sewer service: Storrs Road (Route 195), South Eagleville Road, Eastwood Road, Westwood Road, Hillside Circle, King Hill Road, Maple Road, Northwood Road, Willowbrook Road, Oak Hill Road and Dog Lane.

University officials have been working with the State Dep't. of Environmental Protection to expand the capacity of the UConn sewage system. In addition to providing future service to the aforementioned Orchard Acres and Knollwood Acres housing developments, UConn's expansion plans will provide sewer service to the Connecticut Technology Park project and for various planned University projects. Expanded sewer services near the UConn campus would facilitate higher density residential, commercial and research and development park projects supported in this Plan of Development. Areas potentially suitable for sewer services in the Storrs area include designated commercial areas, medium to high density residential areas and the designated research and development district. All proposed sewer expansions must be coordinated with University officials and carefully reviewed with respect to the specific land use recommendations of this Plan of Development.

c) Town of Windham Sewage System

The Town of Windham owns and operates an extensive sewage system which includes service areas in southern Mansfield. Currently fifty-six single-family homes and twenty commercial or multi-family accounts are served by the Windham system. Sewage effluent from Mansfield properties is transported through Town-owned pipes to facilities owned and operated by the Town of Windham. Mansfield is assessed treatment costs which, in turn, are charged to users of the system. Through arrangements with Windham, Mansfield can transport 500,000 gallons per day from the Mansfield portion of the system. To date, Mansfield's sewage flows into the Windham system are about 165,000 gallons per day. Mansfield streets now served by this system include: Storrs

Road (Route 195) from the Willimantic Town Line to Puddin Lane, Mansfield City Road from Meadowbrook Lane to the Freedom Greene condominium project, and Meadowbrook Lane from Mansfield City Road to Circle Drive.

This Plan of Development supports a limited expansion of the sewage system in southern Mansfield to serve designated medium to high-density residential areas, the Industrial Park area west of Mansfield City Road and south of Pleasant Valley Road, and the Townwide commercial area along Route 195. Expansions beyond these designated areas would not be consistent with this Plan. All proposed sewer expansions must be coordinated with Windham officials.

d) Mansfield Training School Sewage System

A third sewage treatment system serves buildings and land formerly utilized in association with the Mansfield Training School. On an interim basis, this system currently is operated by the State Department of Public Works. Current users of this system include the Northeast Correctional Facility, Mansfield's child care facility on Depot Road and numerous buildings once used by the Mansfield Training School and now operated by the University of Connecticut or other State agencies. This system, which once served about 1,800 residents and associated State Mental Retardation staff members, utilizes a treatment facility on Plains Road, adjacent to the Willimantic River. At this time, future ownership and maintenance responsibilities for this system should remain with the State of Connecticut.

This Plan of Development supports the use of the Mansfield Training School system for the future uses of buildings once associated with the Training School, and for the implementation of the forthcoming plan for the development of new housing and related commerical development in the vicinity of Routes 32 and 44. A concentration of higher-density uses utilizing the existing sewer system promotes many of the goals and objectives of this Plan of Development. Subsection A.4 of this chapter provides more information on the potential reuse of land and buildings previously associated with the Mansfield Training School.

e) Septage Waste Disposal

Septage waste, which is material periodically removed from septic tanks, currently is disposed of at three privately owned and operated septage lagoons located between Route 32 and the Willimantic River in southwestern Mansfield. None of these sites are designated as Mansfield's official depository for septage waste disposal. The Town of Windham has authorized the use of its sewage treatment plant for septage waste disposal, but Mansfield has not officially designated this or any other sewer treatment plant as its septage disposal site. Due to potential surface or ground water quality problems, potential impacts on neighboring property owners and on existing and future recreational uses, septage lagoons should be discouraged.

X, OPEN SPACE

A. General

Mansfield's mix of hill and vale, woodland, grassland, open vistas, farmlands, wetlands, watercourses and lakes, within a network of roads often lined with stone walls and historic structures, is representative of the New England landscape at its best. This environment adds greatly to the public's health and safety and the quality of life. Mansfield will continue to grow in population and in the number of developed properties. Although portions of Mansfield are densely built upon, our town is fortunate in that numerous undeveloped areas still exist. However, many of Mansfield's valuable open areas are not permanently protected. If Mansfield is to retain its environmental quality and rural attractiveness, where its land and water provide a safe and desirable habitat for residents as well as indigenous wildlife, and where new development blends with, rather than destroys its character, then the implementation of a comprehensive open space plan is essential.

This chapter updates information contained in the 1971 and 1982 Plans of Development and incorporates valuable information provided by Mansfield's Conservation Commission, Open Space Preservation Committee and 2002 Character and Resources Committee. It also is important to note that, for the purposes of this Plan, open space should be considered land or water that is permanently preserved in either a near-natural or agricultural state where any development would be limited to recreational improvement such as trails, swimming facilities or picnic areas, or agricultural structures. This open space chapter is designed to integrate the information and recommendations contained in other sections of this Plan (particularly Chapter V, Natural Resources; Chapter VI, Residential Land Use; and Chapter IX, Section B.11, Recreational Facilities) into a comprehensive plan which includes information on Mansfield's existing and desired open space areas and specific priorities and recommendations on expanding the Town's existing open space inventory. The general goals of this open space plan include the conservation, preservation and management of natural and agricultural resources and fish and wildlife habitats; the protection of important surface and ground water systems to ensure a safe future water supply; the protection of wetlands and watercourses and geologic features from potential environmental damage; the retention and expansion of scenic vistas and high-quality recreational opportunities; the expansion of Mansfield's Scenic Road Program, and the overall conservation and preservation of Mansfield's remaining semi-rural New England landscape.

Several steps were followed in developing this open space plan. The initial step was to take into account the natural features in town which might be worthy of preservation. Most of this information is contained or referenced in Chapter V of this Plan, which contains subsections on topography and slope, soils and subsurface geology, wetlands and watercourses, flood hazard areas, ground water quality and aquifer areas, the Willimantic Reservoir watershed, and agricultural resources. Chapter V also contains numerous goals and objectives for protecting Mansfield's natural resources which were considered in this initial step. The next step was to inventory Mansfield's existing open space areas, which include governmentally owned land (see Chapter IX, property owned by Joshua's Tract

Conservation Historic Trust and land permanently protected through conservation easements or the purchase of development rights.

Subsequently, existing land uses and alternative uses to which land potentially suited for preservation might be put were considered. This analysis took into account the overall policy goals of Chapter III of this Plan, as well as the information and recommendations contained in the Residential, Commercial and Industrial Land Use chapters of this Plan of Development. This comprehensive process resulted in the identification of existing and proposed open space preservation areas for the Town. These open space preservation areas have been included on the overall Plan of Development map which is included in the Appendix to this Plan. The final step was to develop a priority program for preserving desired open space areas that currently are not permanently protected.

B. Natural Resources

1. General

In addition to the natural resource data contained in Chapter V of this Plan, the Planning and Zoning Commission has taken into account the following information:

- Tolland County Soil Conservation Services 1979 report, "Important Farmlands of Tolland County," which included a mapping of important farmlands in Mansfield

- Thornton Secor, Jr.'s 1969 Soil Conservation Service report and mapping, "Natural Resources Report of the Town of Mansfield, Connecticut, Soils, Streambelts and Potential Water-Oriented Development Sites"

- Mansfield's 1971 and 1982 Plans of Development

- Eastern Connecticut Environmental Review Team reports on 12 locations in Mansfield, including the Cedar Swamp/Nelson Brook watershed in 1979 and the School House Brook watershed in 1981. The other E.R.T. reports provided environmental information on the following: the Trepel property, Route 44 west of the Fenton River; potential Town Hall sites (1972); the Glasser property, Fellen Road (1973); the Industrial Park site beetween Mansfield City Road, Pleasant Valley Road and Mansfield Avenue (1974); School House Brook Park, Clover Mill Road (1975); Southeast Field Route 89 (1978); Meadowbrook (Freedom Green), Mansfield City Road (1978); UCEPI Conn. Technology Park site (1984); Eaton property, Route 195/Bassetts Bridge Road (1987), and Maplewoods Subdivision, Maple Road (1988).

- Reports and recommendations from Mansfield's Conservation Commission, Open Space Preservation Committee, the Parks Advisory Committee and 2002 Strategic Planning Committee

Although some of the mapping data and information contained in the above referenced reports is now outdated, most of the information on Mansfield's natural resources remains relevant and has been incorporated into this 1992 Plan of Development.

2. Agricultural Resources

This Plan encourages the preservation of existing and potential farm and forest land in Mansfield (see Map #12). The above referenced Tolland County farmlands study has been utilized as the basis for identifying Mansfield's important farmlands. Except where a few land use conflicts prevent the inclusion of all identified farmland, active farms and areas containing prime agricultural soils are recommended agricultural preservation areas in this Plan of Development. Important farmland areas in Mansfield include, but are not limited to the Green farm on Route 32, No. Eagleville Road and Ravine Road; the Stearns farm on Stearns Road, Mansfield City Road, Pleasant Valley Road and Browns Road; the Martin farm on Mansfield City Road, Crane Hill Road and Browns Road; University of Connecticut farmlands on Route 32 north of Route 44; Horsebarn Hill Road, East Road and along various portions of Route 195, including land within the Connecticut Technology Park/UCEPI parcel and in the Spring Hill area; the Kreisler farm on Pleasant Valley Road and Mansfield Avenue; the Ciba, Varga and

McDaniel farms on Wormwood Hill Road; the Nasansky farm on Hanks Hill Road; the Thompson farm on Mansfield City Road; the Hall farm on Old Mansfield Hollow Road, and the Palmer farm on Crane Hill Road.

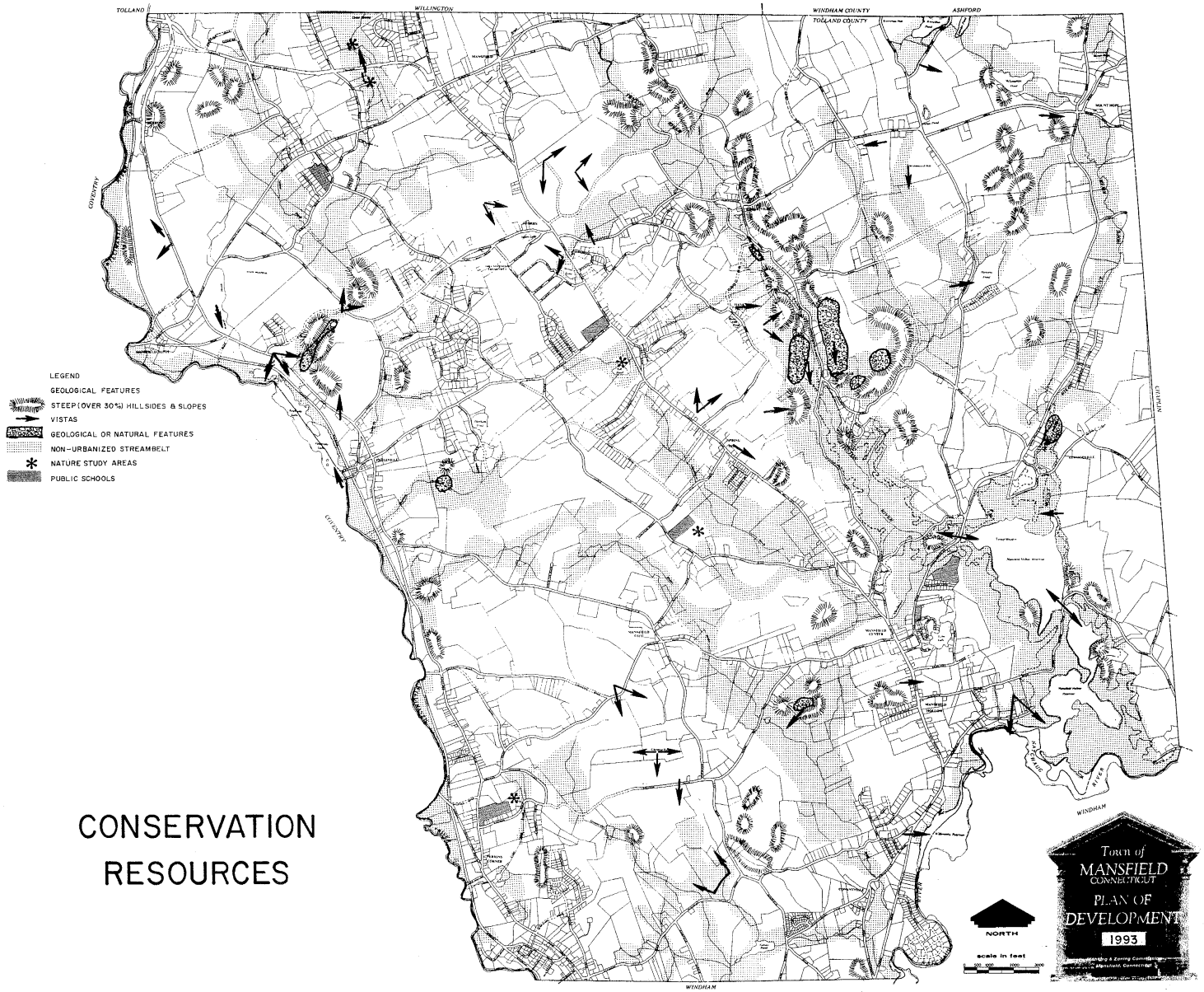
Mansfield is fortunate to have significant areas of forest land, but there is no guarantee that these areas will remain undeveloped. In addition to contributing economic value through timber management and wood harvesting activities, forest lands absorb air pollutants, stabilize soil and help purify surface and ground water, help reduce noise levels, provide wild- life habitat and provide recreational, educational and aesthetic benefits. As an important starting point to protecting productive forest lands, it is recommended that Mansfield officials work with the Soil Conservation Service to conduct a forestry site index and productivity class value study. Such a study which measures productive capacity for tree growth based on soil characteristics, will help identify important forestry areas and sites in Mansfield. Identified productive forest lands should be considered for designation as preservation or low-density conservation areas in the Town's Plan of Development. In addition, zoning and subdivision approval criteria should be revised to discourage land use activities which would have an adverse impact on significant productive forest land acreage and to encourage the inclusion of productive forest land in open space portions of a development plan.

Additional information and land use recommendations regarding farm land and forest land is provided in Chapter V, Sections H and I of this Plan of Development.

3. Conservation and Wildlife Resources

Most of Mansfield's conservation and wildlife resources are contained within or are adjacent to its natural drainage system. These "greenbelts" or "streambelts may be considered as open space corridors containing a permanent flowing watercourse plus flood plains, associated wetlands contributing flow to the stream or recharging ground water, potential water development sites, stratified drift "aquifer" areas, adjacent forest lands, adjacent uplands with steep slopes or severe limitations for development, contiguous land having special aesthetic, wildlife habitat or recreational qualities, and sufficient other land to provide public access for a continuous corridor. The protection of Mansfield's streambelts will help prevent surface and ground water alterations or flooding problems and will help retain the primary habitats of many species of wildlife indigenous to Mansfield. Protected streambelts will preserve important vistas and promote fishing, hiking and other recreational activities.

The "Conservation Resources" map from the 1971 Plan of Development (see Map #13) has been reproduced in this Plan update. This map depicts the Town's streambelt corridors and other natural resource information, including interesting geological features such as Pink Ravine and Wolf Rock and important vistas such as Fifty-foot Cliff and Cooney Rock. Some additional background for the mapped conservation resources and wildlife support maps may be found in Mansfield's 1971 Plan of Development. Except where land use conflicts prevent the inclusion of all identified conservation and wildlife resources, these areas have been included on the overall Plan of Development Map within Open Space Preservation classifications.



CONSERVATION RESOURCES

MAP 14

The following listing summarizes important conservation and wildlife resources:

Significant Conservation and Wildlife Resources

1) The Willimantic River Valley streambelt from the Willington Town Line to the Windham Town Line, including Eagleville Lake, an important stratified drift aquifer associated with UConn well fields north of Route 44 and west of Route 32 and tributary streams;

2) Weaver Brook streambelt, which bisects the former Mansfield Training School property and enters the north end of Eagleville Lake;

3) The Green farm, located along Rt. 32 south of the MTS campus. Important natural features and great scenic beauty make this property exceptionally significant.

4) Cedar Swamp Brook streambelt, which flows from Cedar Swamp (a large, important swamp extending north into Willington and south across Rt. 195 into Mansfield) across the section joining Nelson Brook and ultimately entering the north end of Eagleville Lake. **Cedar Swamp** itself, **scenic falls, old dams, ledges, Pink Ravine Pond and Pink Ravine** are all features of this streambelt system.

5) Nelson Brook streambelt, which enters Mansfield from Willington and joins Cedar Swamp Brook at the center of the section. Two of its tributaries drain unusual wetlands. The first, a unique pereched oligotrophic **pitch pine-blueberry bog,** lies just north of Rt. 195 and west of Tony's Garage. The second is roughly 100 acres of wetlands and glacial ridges. This parcel is nearly surrounded by residential development on Cedar Swamp Rd., Rt. 195, Baxter Rd. and Rt. 44. Another significant wetland, made up mainly of a dwarfed maple swamp, accompanies Nelson Brook from northwest of its crossing of Rt. 44 to its crossing with Birch Rd.

6) North Eagleville Brook streambelt, including a tributary stream north of S. Eagleville Road;

7) Dunham Brook streambelt, including Dunham Pond and associated upland wetlands and tributary streams;

8) Cider Mill Brook streambelt, including Coutu Pond and tributary streams;

9) The Fenton River Valley streambelt, including associated stratified drift aquifer areas, adjacent meadows, ledges, hillsides and tributary streams;

10) Fishers Brook streambelt, including "Codfish Falls" and tributary streams;

11) Gurleyville (Valentine) Brook streambelt, including Valentine Meadow, the Horsebarn Hill Drumlin, adjacent University of Connecticut agricultural land and tributary streams;

12) Tift Pond and the Albert E. Moss Sanctuary south of Route 275, west of Rt. 195 and north of Birchwood Heights Road;

13) Hanks (Hitchcock) Pond and associated streambelt areas;

14) Cooney Rock and adjacent steeply-sloped and hillside areas north of Mulberry Road and east of Chaffeeville Road;

15) Fifty-foot Cliff and adjacent steeply-sloped areas west of Chaffeeville Road;

16) Bradley Brook streambelt, including Hansen's Pond and tributary streams to both Bradley Brook and Hansen's Pond;

17) Schoolhouse Brook streambelt, including Bicentennial Pond, Schoolhouse Brook Park, Chapins Pond and tributary streams;

18) The Mount Hope River Valley streambelt, including associated stratified drift aquifer areas, hillsides, identified potholes and tributary streams;

19) Knowlton Pond, Leander Pond and McLaughlin Pond and the streambelt areas between these ponds;

20) The Mansfield Hollow Reservoir (Naubesatuck Lake) and associated flood plain and stratified drift aquifer areas;

21) Echo Lake, Eaton Bog and associated stratified drift aquifer and streambelt areas;

22) The Natchaug River Valley streambelt, including the Willimantic Reservoir;

23) Kidder-Sawmill Brook streambelts, including a significant white cedar swamp between Maple Road and Mansfield City Road that is on State DEP priority lists; Wolf Rock, east of Crane Hill Road, a significant forest area south of Browns Road, east of Crane Hill Road, north of Puddin Lane and west of Route 195, and tributary streams;

24) Conantville Brook streambelt, including associated stratified drift aquifer areas and tributary streams;

25) The Stearns, Martin and Kreisler farm properties, with hillside vistas extending from Browns Road through Pleasant Valley Road

As part of the Town's comprehensive analysis of conservation and wildlife resources, the following land use value chart provides further information on Mansfield's important non-agricultural natural resources.

MANSFIELD CONSERVATION AND WILDLIFE RESOURCES: LAND USE VALUES

KEY: 0 - Limited Value
1 - Moderate Value
2 - Significant Value

	Groundwater or Surface Water Supply	Wetland Flood Control	Seasonal Wetlands	Erosion Danger	Active Recreation	Passive Recreation	Vista	Scenic Area	Educational Potential	Historical Value	Distinctive Vegetation	Wildlife	Geological Features	Buffer Value (based on existing or potential density)
WILLIMANTIC RIVER DRAINAGE BASIN														
Willimantic River Streambelt	2	2	2	1	2	2	2	2	2	2	0	2	0	0
Weaver Brook Streambelt	1	2	2	1	0	1	0	1	1	0	0	1	0	2
Cedar Swamp Brook Streambelt	2	2	2	1	0	2	0	1	2	0	2	2	0	1
Cedar Swamp	2	2	2	0	0	1	0	1	2	1	2	2	0	1
Nelson Brook Streambelt	2	2	2	1	0	2	0	1	2	0	2	2	0	1
Eagleville Lake	2	2	0	0	2	2	2	2	1	1	0	1	0	1
North Eagleville Brook Streambelt	2	2	2	1	0	1	0	1	1	0	0	1	0	1
Dunham Brook Streambelt	1	2	2	1	0	1	0	1	1	0	0	1	0	0
Dunham Pond and Bog	1	2	2	0	1	1	1	2	1	0	1	1	0	0
Cider Mill Brook Streambelt	2	2	2	1	0	1	0	1	0	0	0	1	0	1
FENTON RIVER DRAINAGE BASIN														
Fenton River Streambelt	2	2	2	2	2	2	2	2	2	2	0	2	1	1
Fishers Brook Streambelt including Codfish Falls	2	2	2	1	0	2	0	2	0	1	0	2	2	0
Gurleyville Brook Streambelt including Valentines Meadow and Horsebarn Hill Drumlin	2	1	2	2	1	1	2	2	1	0	0	1	2	1
Gurleyville Hillside (E. of River)	1	0	0	2	0	1	2	1	0	1	0	2	2	0
Tift Pond and associated streambelt	1		2	1	1	2	0	2	2	0	2	1	0	2

MANSFIELD C ERVATION AND WILDLIFE RESOURCE LAND USE VALUES

KEY: 0 - Limited Value
1 - Moderate Value
2 - Significant Value

	Groundwater or Surface Water Supply	Wetland Flood Control	Seasonal Wetlands	Erosion Danger	Active Recreation	Passive Recreation	Vista	Scenic Area	Educational Potential	Historical Value	Distinctive Vegetation	Wildlife	Geological Features	Buffer Value (based on existing or potential density)
FENTON RIVER DRAINAGE BASIN (con't.)														
Hanks (Hitchcock) Pond and associated streambelt	1	1	1	1	1	1	1	2	1	2	0	1	0	0
Chaffeeville Hillside (E. of River) including Cooney Rock	1	0	0	2	0	2	2	1	0	0	0	1	2	0
Fifty Foot Cliff	0	0	0	1	0	2	2	2	1	0	1	1	2	0
Bradley Brook Streambelt including Hansens Pond and tributary wetlands	2	2	2	1	1	2	2	1	0	0	0	2	0	0
Schoolhouse Brook Streambelt	2	2	2	1	0	2	0	1	2	1	0	2	0	2
Bicentennial Pond/Schoolhouse Brook Park	2	2	2	1	2	2	2	2	2	1	0	2	0	0
MOUNT HOPE RIVER DRAINAGE BASIN														
Mount Hope River Streambelt including potholes north of Atwoodville Road	2	2	2	2	2	2	2	2	0	1	0	2	2	0
McLaughlin - Leander - Knowlton Ponds	1	2	2	1	1	2	1	2	0	1	0	1	0	0
Mount Hope Hillsides (W. of River)	1	0	1	2	0	1	2	1	0	0	0	1	1	0
NATCHAUG RIVER DRAINAGE BASIN														
Nabesatuck Lake	2	2	2	0	2	2	2	2	1	1	0	1	0	0
Echo Lake - Eaton Bog Streambelt	2	1	2	1	1	1	2	2	1	1	2	2	1	1

MANSFIELD CONSERVATION AND WILDLIFE RESOURCES: LAND USE VALUES

KEY: 0 - Limited Value
1 - Moderate Value
2 - Significant Value

	Groundwater or Surface Water Supply	Wetland Flood Control	Seasonal Wetlands	Erosion Danger	Active Recreation	Passive Recreation	Vista	Scenic Area	Educational Potential	Historical Value	Distinctive Vegetation	Wildlife	Geolgical Features	Buffer Value (based on existing or potential density)
NATCHAUG RIVER DRAINAGE BASIN (continued)														
Natchaug River Streambelt south of Mansfield Hollow Dam including Willimantic Reservoir	2	0	1	1	0	1	2	2	2	2	0	1	0	0
Kidder - Sawmill Brook Streambelt	1	2	2	1	0	2	0	1	0	0	0	2	1	1
White Cedar Swamp	1	2	2	0	0	0	0	1	2	0	2	2	0	1
Wolf Rock	0	0	0	0	1	2	2	2	1	2	0	0	2	0
Conantville Brook Streambelt	2	1	2	1	0	1	1	1	0	1	0	1	0	1

C. Existing Preserved Open Space

For the purposes of this Plan, open space should be considered land or water that is permanently preserved in either a near-natural or agricultural state where any development would be limited to recreational improvement such as trails, swimming facilities or picnic areas, or agricultural structures. The following categories of land or water are considered preserved open space:

1) Federally-owned property associated with the Mansfield Hollow Dam Flood Control project;

2) State-owned property that has been specifically designated as an agricultural or open space preserve;

3) Municipally-owned property that was acquired through open space grants, obtained through the Town's regulatory processes or specifically designated or utilized as park or passive recreational area;

4) Property owned by a private land trust or conservation organization, such as Joshua's Tract Conservation and Historic Trust;

5) Other privately-owned property that has been specifically protected against development through the use of conservation easements, the acquisition of development rights or other longterm arrangements with the Town

Mansfield's existing preserved open space land is further described in the following text and is depicted on a map contained in the Appendix to this Plan.

1) Federal Open Space

The Federal government, through the management of the Army Corps of Engineers, owns approximately 1,700 acres of land and water in southeast Mansfield associated with the Mansfield Hollow Dam Flood Control facilities. This area, which includes Naubesatuck Lake and portions of the Fenton, Mt. Hope and Natchaug Rivers, remains in either a near-natural or a passive recreational state and is, therefore, considered open space property. It constitues Mansfield's largest open space preserve. This Federally-owned property includes a State boat launch and picnic area, Mansfield Hollow Dam Park, and an extensive hiking trail system including portions of the Nipmuck Trail.

2) State Open Space

Although the State of Connecticut owns approximately 4,000 acres of land and water in the Town of Mansfield, over half of which may be considered undeveloped or agriculturally utilized, most of this property is not permanently preserved as open space. The recent closing of the Mansfield Training School and the current preparation of a Master Plan to develop some of the previously unutilized Mansfield Training School land exemplify the importance of recognizing only permanently preserved areas as open space.

The only State-owned property that currently is considered permanent open space is the 150-acre Moss Sanctuary, located west of Route 195 between

South Eagleville and Birchwood Heights Roads, and a 10-acre pond area located on the northerly side of Route 44, about 1,500 feet east of Route 32. It is noted that additional State-owned open space likely will be protected in conjunction with State plans for the reuse of the Mansfield Training School property. It is expected that extensive farmland areas will be established on both sides of Route 32 north of Route 44, and that open space areas will be protected along the Willimantic River, along Nelson's Brook, in an area east of Route 32 between Browns and Coventry Roads, and in other designated areas in association with a cluster development plan for residential and commercial use of portions of the M.T.S. land.

3) **Municipal Open Space**

Chapter IX, Section B.1 of this Plan lists all the properties owned by the Town of Mansfield. Most, but not all of these properties may be considered open space. The largest municipally-owned open space preserve is Schoolhouse Brook Park, which is approximately 450 acres in size, excluding the contiguous Mansfield Middle School area (25 acres) and the Town Garage/Dog Pound area (20 acres). Other municipally-owned open space parcels include the east end of the Vinton School property, Sunny Acres Park, Shelter Falls Park, Merrow Meadow, Echo Lake and 26 parcels distributed throughout the Town that were obtained through the Town's land use review process. In total, approximately 700 acres of open space are owned by the Town of Mansfield.

4) **Private Land Trust Open Space**

Mansfield's inventory of open space property has been significantly enhanced by the acquisitions of Joshua's Tract Conservation and Historic Trust. This committed volunteer land trust, which serves many towns in the Mansfield area, currently has 15 holdings in Mansfield, totaling over 220 acres of property. This non-profit land preservation organization owns and maintains the Wolf Rock Preserve in southern Mansfield (80 acres), Bradley Buchanan/Echo Woods Sanctuary in Mansfield Center (81 acres) and the historic Gurleyville Grist Mill on the Fenton River.

Joshua's Tract Conservation and Historic Trust Holdings in Mansfield, April 1, 1993

Property	Location	Acreage
Babcock Preserve	Browns Road	10.2
Bradley-Buchanan Woods	Mansfield Center	22.5
Center Meadow	Mansfield Center	1.24
*Church Farm	Rt. 89, Ashford line	3.1
Dunham Wood	S. Eagleville Rd.	17
Echo Woods Lake	Mansfield Center	3.3
Goodwin property	Browns Road	21.5
Gurleyville Mill & House	Gurleyville	14.5
Haberman Haven	Rt. 89, Ashford line	2.0
Jacobs Hill Preserve	Jacobs Hill	1.85

Knowlton Hill	Knowlton Hill Rd.	20
The Pond Lot	Mansfield Center	10
*Talco Property	Rt. 89, Ashford line	8.5
Windfield Acres	Thornbush Road	.15
Wolf Rock	Crane Hill Rd.	82.64
Ysebaert Sanctuary	Stone Mill Rd.	5.5

*The Church Farm and the Talco property lie partially in Mansfield and partially in Ashford. Only the Mansfield acreage is recorded in this chart.

5) **Other Private Open Space**

Through the cooperative efforts of the Russell and Phyllis Martin family and the State of Connecticut, approximately 290 acres of farmland have been permanently protected in southwestern Mansfield through the State's Acquisition of Development Rights program. The portions of the Martin property that will always remain as farmland are located on Stearns, Mansfield City, Crane Hill, Browns and Coventry Roads.

Another important open space parcel is a 55-acre tract owned by the Lions Club and situated near the junction of Wormwood Hill and Warrenville Roads. The Lions Club property abuts Federally-owned open space land and the Town's landfill site. The Town has a longterm lease arrangement to utilize this property for recreation and open space uses. Two full-size soccer fields have been constructed at Lions Club Park and additional recreational improvements are anticipated.

Chapter IX, Section B.1 includes a listing of 19 properties where conservation easements have been filed to protect over 119 acres of open space land. Although privately owned, these parcels contribute to Mansfield's environmental quality and rural character. In the past ten years, conservation easements have become an important element of Mansfield's Open Space Protection Program.

D. Open Space Priorities

1) General

This Plan of Development recognizes the importance of estalishing important preservation criteria to serve as a foundation for open space decision making, as well as the importance of establishing a specific listing of priority properties or areas. By providing the important open space preservation criteria, this open space plan allows for structured flexibility to respond to changing circumstances and for appropriate consideration of unforeseen opportunities. By providing a specific listing of priority sites or areas, this Plan directly incorporates much of the specific natural resource information and many recommendations contained within the various chapters of this comprehensive Plan. Although additional direction is provided by establishing three priority classifications, it is understood that land availability and acquisition/preservation costs also may influence the implementation of this open space plan.

2) Open Space Priority Criteria

All of the following criteria have been considered in establishing the specific priority listings contained in Subsection D.3. of this chapter. Furthermore, all of these criteria should be considered when evaluating the potential acquisition or preservation of sites or areas that are not specifically listed in Subsection D.3. It is emphasized that these criteria should be applied regardless of property lines and that, in many situations, these objectives can be addressed through the acquisition or preservation of portions of properties. Entire holding should not be considered for protection unless the entire property satisfies these criteria.

A) Does the site/area contribute important inland wetland functions, such as protection of drainage and flood storage capacity; the protection of surface and ground water quality or the protection of important plant, fish or wildlife habitats, including any rare or endangered plant or animal species?

B) Is the site/area important for protecting Mansfield's identified aquifer areas, particularly properties in the primary recharge areas of the Fenton/Mt. Hope/Natchaug aquifer and the Willimantic River aquifer contributing to the UConn well field area west of Route 32 and north of Route 44 (see Chapter V, Section F)?

C) Is the site/area important in protecting Mansfield's surface water quality, particularly the watershed of the Willimantic Reservoir and its tributary rivers and streams and in areas tributary to Bicentennial Pond?

D) Is the site/area currently used for agricultural purposes, or has it prime farmland or forest land soils, particularly properties that are actively used for farming?

E) Is the site/area an important segment of one of the Town's identified streambelt systems, an important wildlife corridor, an important bird and wildlife habitat, including grassland areas of 3 or more acres, or one of the significant conservation and wildlife resources cited in Subsection B.3 of this chapter?

F) Is the site/area adjacent to existing preserved open space areas or schools or important for educational purposes?

G) Does the site/area contribute to the Town's existing or planned hiking trail network or help provide for recreational as well as open space benefits? (See Chapter IX, Section B.11.c)

H) Does the site/area contain distinct geological features, scenic features such as water bodies, ridgetops or existing or potential scenic road frontage, or other scenic vistas of Town-wide importance?

I) Does the site/area contain or abut significant historic or archaeological resources? (See Chapter IV)

J) Is the site/area adjacent to existing or anticipated areas of higher density development, based on the land use classifications of this Plan of Development?

K) Can important site/area natural resources and other attributes be suitably protected through local, State or Federal regulatory controls?

L) Is the site/area within conservation or preservation classifications as designated in the State Conservation and Development Policies Plan and Guide Map?

3) Open Space Priority Sites/Areas

The following listing of open space priority sites/areas is designed to protect Mansfield's significant natural resource and agricultural attributes and to provide direction for implementing the Town's open space plan. This listing was prepared after consideration of the open space priority criteria of Subsection D.2 of this chapter and previous Plan of Development priority recommendations and recommendations from the Town's Open Space Preservation Committee, Conservation Commission, 2002 Strategic Planning Committee and other citizens. Many of the listed open space priorities involve land within the Town's streambelt systems. The preservation of an interconnected Townwide system of streambelt corridors will promote environmental protection and water quality objectives, help preserve native wildlife, promote recreational and educational opportunity and, in general, enhance Mansfield's quality of life and remaining rural character.

Although the specific listing of priorities and this Plan's overall approach to open space preservation is ambitious, implementation will take place over many years, as resources and development pressures dictate. The three categories of priority classifications are designed to facilitate decision-making and implement the various land use goals and objectives cited in this Plan of Development. Many tools will be used to implement this plan (see Subsection E of this chapter), and it is important to emphasize that this Plan does not recommend that all open space priority sites/areas be acquired by the Town of Mansfield.

It is important to re-emphasize that, although this Plan identifies three levels of priorities (high, second, third), other factors such as cost and availability are important considerations for the Town's open space acquisition program. In some cases, it may be appropriate to acquire a third priority site/area or a

site/area not specifically listed in this Plan, rather than a higher priority open space site/area as listed in this Plan. All potential open space acquisitions should be reviewed with respect to the criteria cited in the preceding subsection.

High Priority Open Space Sites/Areas (The sites/areas within this subsection are not in any order of priority)

- Sites/areas within the watershed of Bicentennial Pond, which is Mansfield's only public swimming pond and part of the largest municipal park (northern portion of Schoolhouse Brook streambelt)

- Sites/areas within the Fenton River streambelt and, in particular, Fisher Brook west of Codfish Falls Road (includes Codfish Falls) and a swamp on the east side of Codfish Falls Rd., Fifty-Foot Cliff, and private land along the Nipmuck Trail

- Sites/areas within designated deep stratified drift deposits in the Fenton/Mt. Hope/Natchaug River aquifer

- Sites/areas along the Nelson Brook/Cedar Swamp Brook streambelt, particularly areas of the Cedar Swamp north and south of Route 195 and the Pink Ravine/Ravine Road area

- The farmland along Route 32/No. Eagleville Road and Ravine Road and the farmland along Stearns Road, Mansfield City Road, Browns Road and Pleasant Valley Road (acquisition of development rights)

- Sites/areas east of Route 195 between Bassetts Bridge Road and Cemetery Road, which includes bog and aquifer areas

- Sites/areas within or immediately adjacent to the White Cedar Swamp between Mansfield City Road, Spring Hill Road and Maple Road (northern portion of Kidder/Sawmill Brook streambelt)

- Sites/areas adjacent to the Willimantic Reservoir and adjacent to the Natchaug River between Mansfield Hollow Dam and the Willimantic Reservoir

- Sites/areas along the Willimantic River streambelt from the Willington to Windham Town Lines, particularly properties with river access or within the primary recharge area of the UConn well fields

Second Priority Open Space Sites/Areas (The sites/areas within this subsection are not in any order of priority)

- Bradley Brook streambelt, including Hansen's Pond and tributary streams to Hansen's Pond

- Cooney Rock and adjacent steeply-sloped and hillside areas north of Mulberry Road and east of Chaffeeville Road

- Dunham Pond/Dunham Brook streambelt, particularly areas in the Dunham Pond watershed

- Other active farms in town (acquisition of development rights)

- Gurleyville Hillside (east of Village area)

- Properties in the Kidder/Sawmill Brook streambelt, particularly areas adjacent to the Wolf Rock Preserve

- McLaughlin Pond, Leander Pond and Knowlton Pond and streambelt areas between these ponds

- Other portions of the Mt. Hope River Valley streambelt, particularly areas closest to the river and hillsides between Wormwood Hill Road and Warrenville Road

Third Priority Open Space Sites/Areas (The sites/areas within this subsection are not in any order of priority)

- Cider Mill Brook streambelt

- Conantville Brook streambelt

- Eagleville Brook streambelt

- Gurleyville (Valentine) Brook streambelt, including Valentine Meadow and Horsebarn Hill drumlin

- Hanks (Hitchcock) Pond and associated streambelt areas

- Southern portion of the Natchaug River streambelt south of Willimantic Reservoir

- Weaver Brook streambelt

E. Implementation of Mansfield's Open Space Plan

1. General

Within this chapter, important natural resource areas and existing preserved open space lands have been identified and open space priority criteria and a listing of priority sites/areas have been established. In addition, open space preservation areas have been delineated on the Overall Plan of Development Map included in the Appendix to this Plan. While these preceding sections of the open space plan are important, this implementation component of the plan is considered the most critical element. The implementation of this comprehensive open space plan necessitates the participation of many individuals and organizations and the utilization of multiple programs and tools which will continue to evolve. It also is important to emphasize that the implementation of Mansfield's open space plan necessitates the development of an active open space management program.

Although no specific implementation timetables have been established, it is imperative that Mansfield officials continue to take an active approach to implementing open space goals and objectives. Mansfield's natural resource attributes are finite and, as the Town continues to grow, the costs of preservation will increase. Since the benefits of the Open Space Plan will become increasingly important over time, active implementation of this Open Space Plan will be a sound economic investment in Mansfield's future.

It is important to reemphasize that this Plan does not recommend that all identified open space sites and areas be owned by Mansfield or other governmental agencies. Many of the objectives of this Open Space Plan can be achieved through conservation easements or the purchase of development rights which restrict the use of land but do not transfer ownership. Land trusts, conservation organizations, private homeowner's associations and taxation policies also have important roles. The remainder of this chapter provides information on current programs and tools that should be used or considered in the implementation of this Plan.

2. Municipal Acquisition of Land, Conservation Easements and Development Rights

Many of Mansfield's existing preserved open space areas have been protected through direct purchase by the Town. Through the active use of Federal and State grant programs which require a municipal contribution, the Town's expenditures have been leveraged for maximum open space benefit. Since the mid-1980's, Mansfield has annually contributed $50,000 to an open space preservation fund. These contributions have facilitated grant applications which often have a limited submission timeframe. In 1990, Mansfield residents approved, through a referendum vote, the expenditure of one million dollars for the acquisition of open space land. This money, which is expected to be allocated during the next few years, will significantly contribute to the implementation of this Open Space Plan. The Town of Mansfield has not yet expended or authorized money for the acquisition of conservation easements or development rights.

This Plan recommends that the Town of Mansfield continue to take a strong leadership role in preserving important open space sites/areas through the following activities:

a) Annual contributions and supplemental bond authorizations to a municipal land conservation fund to be used for purchase of land, conservation easements or development rights

b) Active participation in Federal and State Open Space Grant programs

c) Consideration of a local land-transfer fee program to fund or supplement the land conservation fund. Such a fee could be restricted to transfers of larger tracts of land.

d) Continued support for a municipal Open Space Preservation Committee whose primary responsibility would be the coordination of open space acquisition and preservation activities

e) Consideration of modifications to the 490 Tax Abatement Program (see Subsection E.4 of this chapter)

3. Land Use Regulations

Many of the open space goals and objectives of this Plan can be addressed through the regulatory activities of the Mansfield Inland Wetland Agency (IWA) and through the zoning and subdivision authority vested in the Planning and Zoning Commission (PZC). It is important to note that enabling statutes and case law establish a framework within which both the IWA and PZC must operate. Cognizant and respectful of these legal limitations, the IWA and PZC should periodically review local regulatory provisions. Whenever legally possible and not in conflict with other goals and objectives of this Plan of Development, the regulations should be updated and revised to promote the implementation of this Open Space Plan.

In addition to its primary role of regulating land use activities within or proximate to inland wetlands and watercourse areas, the IWA has protected some important open space areas by requiring or recommending that conservation easements be incorporated into development plans. The IWA is encouraged to help identify and establish conservation easement areas in Mansfield. Consideration should be given to revising the Town's Wetland Regulations to encourage conservation easements or other approaches to preserve regulated wetland areas. During the past twenty years, the Town has acquired a number of significant open space parcels and conservation easement areas through the Town's subdivision requirements. Mansfield's subdivision requirements for open space were comprehensively revised in 1991 and current provisions include a number of dedication options, including the transfer of fee or development rights to a governmental agency, land trust or homeowners association. A payment in lieu of dedication also is a specified option. Similary dedication provisions should be considered within the Zoning Regulations for multi-family projects and other significant land use developments.

As more specifically detailed in Chapters IV and V of this Plan of Development, the protection of historic and natural resources is directly tied to the Planning and Zoning Commission's designation of land use classifications or zones, specific permitted use provisions within each zone and specific approval standards to address potential land use impacts. Many of the land use and regulatory recommendations contained in Chapters IV and V of this Plan, which include

density recommendations and provisions regarding clustering in non-sewered areas, are intricately associated with the implementation of this Open Space Plan. Upon approval of this Plan of Development, the Town's Zoning Map and land use regulations should be comprehensively reviewed and revised to address the recommendations contained within this Plan.

4. Taxation Policies

Municipal taxation policies can influence the rate of development within a town. Althouth reduced taxes for open space land does not guarantee permanent preservation, the Planning and Zoning Commission encourages reduced rates for open space land as a means to help property owners retain undeveloped acreage. To supplement current 490 Program tax provisions for active farms and forest lands greater than 25 acres in size, the Commission hereby repeats its 1982 local tax abatement recommendation.

"To supplement this Plan's identification of open space and conservation priorities and to help implement this Plan's general policy goal of conserving and preserving Mansfield's rural atmosphere, the Planning and Zoning Commission recommends the Town's adoption of the following local tax abatement measure:

Pursuant to the provisions of Section 12-107e of the Connecticut General Statutes as amended, all land in the Town of Mansfield is designated and taxed as open space land, with the following exceptions:

1. all building lots in a subdivision approved by the Mansfield Planning and Zoning Commission and recorded in the Mansfield Land Records, except areas designated as open space or agricultural preservation areas in the Plan of Development;

2. all land designated in the Plan of Development as Medium to High Density Residential areas, or as Commercial, Industrial or Institutional areas;

3. all land developed in accordance with the special permit procedures of the Zoning Regulations for multi-family housing without sewers, except areas designated as open space or conservation areas on the approved plan;

4. all land which is less than five (5) acres in size, and any land which has been improved as accessory to a residential use

This tax abatement measure, which requires the Town Council's approval for implementation, is designed to ensure taxation on a use value rather than market value and to help prevent the forced and premature conversion of open space land into more intensive forms of development. It is also recommended for the following reasons:

1. to promote orderly development;
2. to maintain and enhance natural or scenic resources;
3. to protect our streambelts and both surface water and ground water (aquifer) supplies;
4. to promote conservation of soils and wetlands;
5. to enhance public recreation opportunities;
6. to preserve historic sites;

7. to enhance the value to the public of neighboring or abutting (a) parks, (b) forests, (c) wildlife preserves, (d) reservations, (e) sanctuaries and (f) other open spaces;
8. to promote the owning and maintaining of wood lots of 5-25 acres in size and thus promoting conservation of non-renewable energy supplies;
9. to provide for the existence of parcels of greater than 25 acres which are neither farmed nor part of a certified forestry management program (and, therefore, not otherwise qualified for tax abatement under Public Act 490 legislation)."

5. Coordination with Federal, State and Local Governments

A significant portion of Mansfield's preserved open space is owned by the Federal government in conjunction with the Mansfield Hollow Dam project. Although it is unlikely that this Federal preserve will increase in area, it is important that Mansfield retain open lines of communication regarding the use and management of this valuable open space preserve.

Although the State of Connecticut owns a significant amount of land in Mansfield, most of the land within Plan of Development designated open space areas is not permanently preserved. Currently, Mansfield officials are working with State officials in association with the planned reuse of the former Mansfield Training School and to create preserved open space areas along the Willimantic River and Nelson's Brook and in a hillside area between Mansfield City and Coventry Roads. In addition, the State of Connecticut recently dedicated as an open space preserve the Moss Sanctuary between South Eagleville and Birchwood Heights Roads. Mansfield officials should continue to work with the State to designate open space preserves on State land bordering the Fenton River and in other Plan of Development designated open space areas. In similar fashion, existing and potential agricultural land associated with the University of Connecticut or the former Mansfield Training School should be permanently preserved for future agricultural use. Examples of State agricultural land that should be permanently preserved include: farmlands adjacent to Horsebarn Hill Road; East Road; Route 32, north of Route 44, and Route 195, particularly agricultural land on the Connecticut Technology Park site, Schoolhouse Brook Orchard and farmland in the Spring Hill area.

In addition, the State of Connecticut should be encouraged to expand its Acquisition of Agricultural Development Rights program. Over 290 acres of the Martin family farmland in Mansfield have been preserved through this program. (See Preserved Open Space/Agricultural Land Map in the Appendix to this Plan.)

Recently, the National Park Service approved funds for a "Greenway Plan" as part of the Quinebaug-Shetucket River Heritage Corridor project. This greenway study will include the entire length of the Willimantic River between Mansfield and Coventry. The study, which will include an inventory of resources and a planned route for a riverside hiking trail, will help promote recreational and open space objectives. In similar fashion, Mansfield officials can work with adjacent communities and the State of Connecticut to protect and extend beyond Mansfield's borders. In addition to the Willimantic River Corridor, opportunities exist along the Cedar Swamp Brook, Fenton River and Mount Hope River streambelts and in the Leander/Knowlton Pond area.

6. Land Trusts

A. *Joshua's Tract Conservation and Historic Trust* - Many of Mansfield's valuable open space areas, including Wolf Rock within the Kidder/Sawmill Brook streambelt, have been permanently protected through the activities of Joshua's Tract Conservation and Historic Trust. Primarily as a recipient of gifts, this local trust has made a valuable contribution to the preservation of open space in Mansfield and in other nearby communities. Recent State regulations permit increased cooperation between municipalities and land trusts in purchasing open space. Discussions regarding cooperative efforts between the Town of Mansfield and Joshua's Trust have begun and this Plan encourages such a coordinated approach.

B. *Town-sponsored Community Land Trust* -Another approach that should be considered in Mansfield involves the establishment of a Town-sponsored non-profit open space community land trust. Such a trust could purchase land using money from the Town's General Fund and from grants. Alternative funding could be raised through a bond issue. Such a trust could function independently from the Town and potentially subdivide land, preserve open space areas and sell lots to finance alternative acquisitions. Any subdivision activities would come under the review and regulation of the Mansfield Inland Wetland Agency and Planning and Zoning Commission. In similar fashion, a land trust could promote affordable housing opportunities.

7. Donations/Gifts

Governmental agencies and non-profit land trusts often have limited resources to devote to open space preservation activities. Many individuals have strong convictions regarding the preservation of their land and would be willing to consider gifts which could reduce income tax obligations. For example, in 1991, the Merrow family donated to the Town 15 acres of land along the Willimantic River, south of Merrow Road. To facilitate additional opportunities for open space donations in Mansfield, the Town should establish and publicize standarized procedures for accepting and recognizing gifts of land or money to purchase open space land. Methods of designating donated parcels should be established and the gifts should be recorded in one place easily accessible to the public. Such recognition provides evidence to future donors that their gifts will be preserved and appreciated by future generations.

8. Scenic Roads Program

In 1990, the Town of Mansfield adopted a local Scenic Road Ordinance based on enabling State Statutes. Since its adoption, Scenic Road status has been approved for Codfish Falls, Mount Hope, Old Turnpike and Summit Roads. Designation as a Scenic Road reinforces many of the open space objectives of this Plan and this Plan encourages efforts to increase Mansfield's inventory of "scenic roads." Particular attention could be focused on those roads or portions of roads that abut Plan of Development designated open space areas.

9. Management of Open Space Areas

To protect and enhance the quality and character of preserved open space areas, it is essential that the Town develop an active open space management program. Town officials should maintain a current inventory of all public and privately-

preserved open space, including maps, deed descriptions, and, for conservation easement areas, a listing of current property owners. The property lines of each Town-owned open space area and each conservation easement area should be delineated with iron pins and boundary markers posted on trees or wooden posts. In addition, each preserved open space area should be visited at least annually, and an annual written inspection report including photographs and site observations should be prepared and kept on file in the Municipal Building. Monitoring responsibilities could be shared by the Town's various open space committees (Conservation Commission, Open Space Preservation Committee, Parks Advisory Committee) with assistance from staff members and perhaps, through a stewardship program, neighboring property owners.

In addition to record-keeping, boundary delineation and monitoring activities, consideration should be given to actively managing the resources on some of the Town's open space areas. Activities such as field mowing, tree and shrub pruning, tree, shrub and wildflower plantings and planned tree removal could improve plant and wildlife habitats and promote forestry management objectives. To help encourage the protection and management of open space areas that are not directly associated with the Town of Mansfield, appropriate communication and coordination contacts must be established and maintained with State, Federal and Land Trust officials and with private owners of open space areas.

XI, Transportation and Circulation

A. General/Changes Since 1982

To help ensure the safe and efficient movement of people and goods within the Town of Mansfield, to retain the Town's rural, historic and scenic character, and to avoid disruptions and nusiances for established residential neighborhoods, the Town's transportation systems have been reviewed with respect to existing and anticipated needs and the policy goals established in this Plan. In addition to evaluating roadway conditions, accident statistics and existing and anticipated automotive traffic volumes, consideration has been given to public transit, bicycle and pedestrian traffic, which will become increasingly important elements in the Town's transportation system. It also is important to emphasize that the goals and objectives of this chapter are designed to improve air quality and promote objectives of the Federal Clean Air Act, as amended in 1990.

Citizen concerns over traffic safety and congestion have become an increasingly important issue in Mansfield. Many of the expressed concerns and experienced problems have been oriented to portions of Route 195 and roadways abutting or leading to the University of Connecticut campus, but concerns over traffic safety and air quality have been expressed in conjunction with new development projects throughout the Town. Residents also have expressed concern that extensive alterations and widening of the Town's street system will detrimentally affect the character of the Town and increase vehicular speeds. This Plan of Development addresses these concerns by establishing goals and recommendations to both reduce vehicular traffic, particularly single-occupant usage, and to protect and, where appropriate after careful study, improve the Town's existing road system. Recommendations also are included to address potential traffic impacts from new developments in town. Implementation of these goals and recommendations will require the cooperative efforts of Town, regional and State officials, Mansfield residents and non-resident employees and visitors. Since many of Mansfield's existing transportation concerns are directly related to vehicular traffic associated with the University of Connecticut, it is essential that UConn officials be encouraged to take an active role in setting and implementing policies and programs that promote public transit, ridesharing and pedestrian and bicycle traffic. The recently adopted Federal Intermodal Surface Transportation Efficiency Act of 1991, in conjunction with the Federal Clean Air Act as amended in 1990, and the Energy Policy Act of 1992, will help expedite the attainment of local transportation goals and recommendations. It is important to emphasize that the recommendations of this chapter have been reviewed in conjunction with and coordinated with the land use goals and objectives of the other portions of this Plan of Development. Many of the interrelated goals of this Plan are oriented toward the establishment of an energy-efficient pattern of land use which would promote public transit opportunities.

In the last decade there have been a number of changes to the Town's transportation and roadway systems. The Windham Region Transit District has extended its fixed route bus service in Mansfield and Windham and expanded its Dial-a-Ride program. The University of Connecticut began a limited fixed-route shuttle bus service to serve multi-family housing projects on Hunting Lodge and Birch Roads and UConn uses on the former Mansfield Traing School property. In 1991, AmTrak

began a Willimantic stop on its "Montrealer" route and Arrow Line Bus Company started a weekday UConn/Hartford bus service. Presently, Peter Pan Bus Company provides service to Bradley International Airport and Boston, Massachusetts. In addition, private taxi service in the Mansfield/Windham area has expanded. Unfortunately, with the exception of the Dial-a-Ride program, public transit services in Mansfield have been underutilized.

Since 1982, Route 195 has been widened at the Route 44, Route 275 and Riverview Road intersections and new Route 195 traffic signals have been installed at Cedar Swamp Road,. Gurleyville Road and Riverview Road. The intersection of Conantville and North Frontage Road has been widened and new traffic signals have been installed along North Frontage Road at Mansfield City Road and at Conantville Road. Since the mid-1980's, new local roads have been constructed and accepted by the Town off Birch Road (Silver Falls Lane), Mansfield City Road (Deerfield Lane), Maple Road (Fieldstone Lane), Meadowbrook Lane (Michelle Lane and Court), Middle Turnpike (Nipmuck Road), Puddin Lane (Jacobs Hill Road/Britony Court) and Warrenville Road (Boulder Lane). In addition, Brookside Lane, Highland Road and White Oak Road have been extended. During this period, the southern portion of the Connecticut Technology Park roadway link between North Eagleville Road and Route 44 was constructed and the remaining section is being designed with expected construction in 1994. Of importance for pedestrian traffic, a sidewalk was constructed along South Eagleville Road to connect Route 195 to the Town's Senior Center and nearby multi-family housing off Maple Road. In addition, a new walkway was constructed to link Celeron Square and adjacent multi-family housing on Hunting Lodge Road to the UConn campus area.

With the exceptions of the possible Route 6 expressway project between Columbia and Bolton which could affect traffic patterns in southern and western Mansfield, and the expected completion of the Connecticut Technology Park roadway, which is expected to affect traffic north and west of the UConn campus, Mansfield's overall roadway system and circulation patterns are not expected to change significantly in future years. Localized changes are expected to occur as specific developments take place in various areas of town. It is important to note that, in the past decade, numerous traffic studies have been submitted to the Town in association with various development projects, and local traffic count data has been obtained. The Mansfield Public Works/Engineering office, currently collects traffic count information which is available to assist local officials with future transportation decisions.

It also is important to note that in the spring of 1992, the Town Council appointed a citizen Transportation Advisory Committee (TAC) to study the Town's road and transit improvement priorities and to asist local officials with decisions regarding transportation issues. TAC members have met with UConn, State Dep't. of Transportation and regional officials and have evaluated the numerous interrelated factors associated with the establishment of transportation priorities. In a 2/9/93 report entitled "The Prioritization of Proposed Road Improvements in the Town of Mansfield, Connecticut," the Transportation Advisory Committee has documented a detailed road improvement review methodology. This methodology establishes specific road improvement criteria and emphasizes the consideration of non-structural measures prior to more costly and potentially incompatible character-changing structural road improvement measures. This Plan of Development endorses the Transportation Advisory Committee's evaluation process, which can be applied to current as well as future road improvement

issues. It also is recognized that this evaluation process will be refined and improved over time. The elements of the Transportation Advisory Committee's methodology are described in more detail in subsection F of this chapter. The Transportation Advisory Committee also prepared a Bicycle Route Plan which is discussed in more detail in subsection E of this chapter.

B. Transportation Goals and Recommendations

The following goals and recommendations have been established to promote vehicular and pedestrian safety, to help formulate transportation improvement programs and, in general, to promote the overall goals and objectives of this Plan of Development.

1. A primary goal of this Plan is to reduce vehicular traffic on Mansfield roadways to pre-1992 levels. To help accomplish this goal, this Plan advocates the use of all legally enforceable measures that will help minimize vehicular traffic associated with new land uses and an expansion and active promotion of public transit services and ride-sharing programs, especially those serving the Town's major population, employment and commercial areas. Programs that discourage vehicular use, particularly single-occupant trips, should be implemented in conjunction with public transit and ride-sharing programs. Public education should be an integral component of all programs to discourage vehicular use. The introduction of fare-free public transportation and the introduction of significant parking fees and other auto use disincentives should be considered. Primary public transit service areas should include the northwestern sector of town, which includes the University of Connecticut and former Mansfield Training School areas, and southern portions of Town adjacent to the Town of Windham. All public transit planning and implementation activities must be coordinated with officials from the Windham Region Transit District, the State Department of Transportation, the University of Connecticut and the Town of Mansfield. To maximize program efficiency, Mansfield officials should encourage and participate in a comprehensive analysis to determine why existing transit services are underutilized and the types of transit services that are needed and would be utilized. More specific information on public transit and ride-sharing is contained in Subsection D of this chapter.

2. All transportation improvement programs and projects in Mansfield should be based on a comprehensive pre-design planning analysis that defines existing and anticipated problems, considers alternative solutions to defined problems and emphasizes a broad, systematic, intermodal approach that considers all cumulative and interrelated impacts. Transportation planning in Mansfield should not be done on a segmented, improvement-by-improvement or program-by-program basis. It is essential that residents be given ample opportunities to comment during the pre-design planning process and that all pre-design planning efforts, particularly those involving State roadways and public transit services, be coordinated with regional and State officials.

3. To achieve many of this Plan's transportation objectives, the University of Connecticut, in direct association with the State Department of Transportation and the Windham Regional Transit District, must assume a leadership role in promoting public transit and ride-sharing programs and in reducing vehicular traffic in and out of the University campus. An expansion of UConn's shuttle bus program, the creation of new park and ride lots to serve the campus area and the establishment of incentives to increase employee car/van pooling and variable work hours for staff are examples of how the University can help reduce vehicular traffic on Mansfield roadways. In addition, UConn's parking policies should be revised to promote participation in public transit and ride-sharing services. Mansfield officials must

work closely with University officials to encourage an alteration of existing transportation and parking programs. Subsection D of this chapter provides specific recommendations regarding public transit and ride-sharing programs associated with the University of Connecticut.

4. A concerted effort should be made to encourage pedestrian and bicycle use in Mansfield. Off-road sidewalk and bicycle path improvements should be considered in designated high-density areas and in conjunction with all new multi-family, commercial and industrial land uses. Roadside safety improvements that would enhance safe pedestrian and bicycle use should be considered in conjunction with road maintenance and improvement programs. Particular attention should be given to areas adjacent to the University of Connecticut and other public facilities, to commercial and medium to high-density areas designated in this Plan and along roads designated as bicycle routes in this Plan. More specific information on pedestrian and bicycle improvement priorities is contained in Subsection E of this chapter.

5. To provide for the safety of vehicular and pedestrian traffic, the Town must continue to administer appropriately designed construction standards for new roads, driveways, parking areas, pedestrian ways and bicycle paths. Regulatory provisions should be periodically updated to take into account vehicular, as well as pedestrian and bicycle usage, public transit uses, aesthetic considerations and othe land use objectives. Local standards should include specifications for a road's width, base, surface, drainage, horizontal and vertical alignments, pedestrian and bicycle paths, landscaping, and for driveway drainage and sightlines. Regulatory provisions should be designed to minimize new curb cuts, particularly in commercial and industrial areas and along arterial streets. Privately financed improvements to Town road, sidewalk and drainage systems may be necessary elements of a private development project when improvements are needed to protect the public's health and safety. Developers of land accessed by abandoned roads should be required to upgrade these roads to current Town standards. Impact fee programs also should be considered to address transportation needs resulting from new development projects. Any impact fee program should attempt to collect money and implement necessary improvements prior to the completion of the development project.

6. An important goal of this Plan of Development is to preserve trees, stone walls and other roadside features which contribute to the Town's attractive rural and historic character. To promote this goal, it is recommended that Mansfield officials work with resident property owners to expand the Town's scenic road program as authorized by Section 12a-63 and 13a-139 of the State Statutes and Mansfield's Scenic Roads Ordinance. Town officials also should encourage the State to designate portions of State roads in Mansfield as "scenic." In addition, it is recommended that regulatory standards encourage the use of underground utility lines and discourage extensive cut-and-fill roadways and driveways. Common driveway usage should be authorized in certain situations, subject to specific regulatory controls and provisions to require street trees of appropriate species along new subdivision roadways and along commercial and industrial frontages should be adopted. Whenever vegetation, stone walls, sidewalks and any other roadside features must be altered or removed to accommodate approved development projects, remediation measures shall be designed and implemented in

association with the development project.

7. To provide safely for existing and future land uses as designated in this Plan of Development, existing streets must be systematically maintained and, where appropriate, after careful analysis improved or altered to serve community needs. Road improvement priorities should be based on a comprehensive pre-design analysis (see #1 above), the road improvement review methodology established by Mansfield's Transportation Advisory Committee, designated street classifications (see Subsection C of this chapter) and other recommendations cited in this transportation chapter. In general, non-structural measures should be considered prior to structural alterations and road improvements should be oriented toward safety improvements on arterial and collector streets, particularly those streets serving public facilities and the higher-density areas defined in this Plan of Development. Although some safety improvements may be appropriate along Route 195, a character-changing widening of this roadway is not supported by this Plan of Development. In the spring of 1993, the State Department of Transportation proposed the inclusion of Route 195 on the listing of National Highway System roads, despite the opposition of Mansfield's Town Council and Planning and Zoning Commission and the Windham Regional Planning Agency. Inclusion of Route 195 on the National Highway System listing is not considered compatible with this Plan of Development. If the Federal Highway Administration approves a National Highway System designation for Route 195, it will be increasingly important that Town officials monitor and, where appropriate, regulate all activities that may affect traffic flows on Route 195. Additional specific information on road improvement priorities is contained in Subsection F of this chapter.

8. Potential traffic safety and nuisance problems are usually associated with vehicular speed and are often most significant for residents of properties located along arterial or collector streets. Potential impacts are amplified for residents of historic properties that are located in close proximity to roadway surfaces (in particular, within designated village areas) and for residents of properties situated along roads that serve as short-cuts or bypasses of congested areas. To minimize traffic safety and nuisance impacts on all roads in Mansfield, it is essential that Town and State officials strictly enforce speed limits. In addition, ongoing educational programs should be established to seek speed limit compliance from residents, visitors and those employed locally. Successful programs from other communities should be studied and, where appropriate, implemented locally. Subject to possible legal obstacles and a thorough review of safety issues, the Town and State should consider the installation of speed humps and differential pavement surfaces, particularly on high speed roads and those collector roads that serve as short-cuts or bypasses, on those sections of roadways passing through designated village areas and along those roads that are part of a designated bicycle route.

9. To help reduce vehicular traffic, land use regulations should continue to allow permitted use flexibility for home office uses. Employers should consider programs to allow employees more opportunities to work at home.

10. Consideration should be given to establishing a fund to conduct post-development evaluations using the same criteria that initially justified the

project. Developers should be required to contribute to such a fund as a condition of project approval.

C. Street Classifications

A three-tier street classification system has been established based on existing land uses, roadway locations and traffic flows, as well as anticipated areas of development and resultant transportation demands. These classifications will serve as a valuable longterm guide for the design and review of public transit and road improvement projects. The transportation map contained in the Appendix to this Plan delineates all arterial and collector streets.

1. Arterial Streets

The first street category, arterial streets, serve as the primary intermunicipal and interregional transportation links. They carry the highest traffic volumes and provide direct access to the Town's major employment and commercial areas. In Mansfield, the State of Connecticut owns and maintains a network of roadways which perform this arterial function. Whereas a safe and free flow of traffic is desirable on arterial streets, any existing impediments on these major roadways should be reviewed and appropriately addressed, and new land use activities on arterial streets must be carefully regulated. (See the arterial street improvements section of this Plan.) In addition to any local approvals, all curb cut and drainage work on State roads requires authorization from the State Department of Transportation. The following streets are classified as arterials:

Route 6; Route 31, Higgins Highway; Route 32, Stafford Road; Route 44, Middle Turnpike; Route 89, Warrenville Road; Route 195, Storrs Road; Route 275, South Eagleville Road; Route 320, Sabin Road; Route 632, North Frontage Road; Route 633, South Frontage Road; and Route 430, North Eagleville Road, between Route 195 and Hunting Lodge Road.

Upon completion, the Connecticut Technology Park roadway between Route 44 and North Eagleville Road also will serve as an arterial street.

2. Collector Streets

As a complement to the arterial street network, collector streets complete the major transportation linkage between the various sections of the community and between Mansfield and other towns. In general, collector streets connect residential neighborhoods to the arterial street system and to community centers not served by the arterials. Although collectors have less traffic than arterials, they handle signficant volumes of through traffic and, therefore, must be designed and constructed to a stringent safety standard. Fortunately, existing streets satisfy the locational need for collector streets in Mansfield. However, as the Town grows, it will be increasingly important to maintain and, as appropriate after careful review, improve a number of the Town's collector streets. Based on existing and anticipated land uses and traffic flows, the following roadways are considered collector streets in this Plan of Development:

Ash Street; Atwoodville Road; Bassetts Bridge Road; Baxter Road from Route 44 to Route 195; Birch Road from Hunting Lodge Road to Route 44: Browns Road; Cedar Swamp Road; Chaffeeville Road; Clover Mill Road; Codfish Falls Road; Conantville Road; Daleville Road; Depot Road; Eastwood Road; Gurleyville Road; Hillside Circle; Hunting Lodge Road;

Knowlton Hill Road from Wormwood Hill Road to Ashford Town Line; Mansfield Avenue; Mansfield City Road; Maple Road; Meadowbrook Lane; Moulton Road; Mount Hope Road; North Eagleville Road from Route 32 to Hunting Lodge Road; Pleasant Valley Road; Puddin Lane; Separatist Road from South Eagleville Road to Hunting Lodge Road; Spring Hill Road; Stearns Road; Westwood Road; Wormwood Hill Road from Warrenville Road to Knowlton Hill Road.

It should also be noted that numerous streets within the University of Connecticut campus carry heavy traffic flows and may appropriately be considered collector streets.

3. **Local Streets**

The third category, local streets, primarily serve as accessways to residential units. Local streets usually carry the lowest volumes of traffic and roadways standards should be oriented toward lower vehicular speeds and the maintenance of residential character. All streets not identified as arterial or collector are considered local streets.

D. Public Transit/Car-Van Pooling

Many important goals of this Plan involve the support of existing public transit programs and the promotion of new facilities and programs to increase car/van pooling and the use of public transit options. Public transit and car/van pool programs in association with programs to discourage vehicular use, particularly single-occupant trips, offer the best opportunity to reduce vehicular traffic and, therefore, directly enhance vehicular, pedestrian and bicycle safety along Mansfield's roadways. This Plan is designed to promote an increase in the percentage of workers who use public transportation (.9%, according to the 1990 Census) and participate in carpools (11.3%, according to the 1990 Census). Many of this Plan's suggestions necessitate active involvement by University of Connecticut and State Dep't. of Transportation officials. It is essential that Town and regional officials encourage UConn and other State officials to stress public transit in their planning and funding programs. Public transit and ride-sharing should be a regular agenda item for Mansfield/University liason committee meetings, for Windham Region Transit District and Windham Regional Planning Agency meetings, and for all meetings with State Dep't. of Transportation officials.

The improvement recommendations noted below have been established as a starting point, but should not be considered an all-inclusive program for encouraging public transit and car/van pool use. As previously noted, Mansfield officials should encourage and participate in a comprehensive analysis to determine why existing transit services have been underutilized and what types of transit services are needed and would be utilized. This listing will assist the Town in its review of State and regional transportation and public transit plans and in establishing local funding priorities.

1) Maintain and expand (by route and hours of operation) existing Windham Regional Transit District programs, including the Willimantic/Storrs fixed-route bus service and the on-demand Dial-a-Ride service. Reliable funding programs for both operating and capital improvement needs should be established and necessary improvements to ensure accessibility to handicapped individuals should be implemented. Additionally, fare-free bus service should be considered. Expanded transit services should include:

   a) the Willimantic/Storrs bus service should include Sunday and evening hours during both UConn vacations and year-round. Connecting bus service between Storrs and the "Montrealer" passenger rail station in Willimantic should be considered.

   b) The Willimantic/Storrs bus service should incorporate a complete transit loop by including fixed-route service along Routes 44 and 32, including service to the former Mansfield Training School property.

   c) Fixed-route bus service should be considered for the southern section of Mansfield, south of Puddin Lane between Route 195 and Mansfield City Road. In addition, service connections to the Mansfield Library, the Mansfield Middle School and Bicentennial Pond should be considered.

   d) Dial-a-Ride services should include evening and weekend hours and should consider out-of-region services for elderly and handicapped individuals.

e) All WRTD bus pulloffs should be appropriately located, well lighted and should include bus shelters and bicycle lockers. Examples of locations where bus stop improvements will greatly enhance public transit utilization include: Route 195 at the Mansfield Municipal Building, Route 195 in Mansfield Center and Route 195 in the East Brook Mall area. Additionally, consideration should be given to adding a new bus stop on Route 195 in the vicinity of Clover Mill Road.

2) Maintain and expand (by route and hours of operation) existing University of Connecticut public transit and car/van pooling programs. More specifically:

a) UConn should promote and expand its bus shuttle service from remote parking lots and the former Mansfield Training School property to the center of the Storrs campus. Additional remote "Park and Ride" lots should be provided and served by shuttle bus service in areas north, south and west of the campus. Suggested locations include land along Route 195 in the vicinity of I-84, Route 32, Route 44 and Route 6 and land along Route 44 on the former Mansfield Training School property. Special event shuttle bus service also should be provided to these remote lots. All remote lots should have adequate lighting, bus shelters, bicycle lockers and security services, possibly through student employment.

b) UConn should promote and expand its current fixed-route bus route to serve all large apartment complexes in Mansfield, Willington and Ashford. Suitably located off-road bus stop locations with bus shelters should be provided. Additionally, UConn's off-campus bus program should increase its hours of operation including times when the University is not in session.

c) UConn officials should implement their Campus Master Plan, which eliminates many interior roads and parking areas and creates a more pedestrian-oriented campus center. Parking policies should be revised to reinforce, not undermine, shuttle bus service. Parking permits for students should be strictly regulated and enforced. A concerted effort should be made to restrict the use of private automobiles by UConn students.

d) UConn officials should promote and reinforce through parking permit policies, car/van pool programs for employees.

e) UConn officials and other major employers should consider to the greatest extent possible the practice of flexible hours for employees. This practice will help reduce peak traffic flows.

3) The State Department of Transportation should expand its commuter bus and park and ride programs. More specifically:

a) The commuter bus to Hartford which currently ends in Coventry should be extended to Mansfield, with stops at the former Mansfield Training School property and in the UConn campus area.

b) Park and ride lots should be created at the former Mansfield Training School property at locations between UConn and I-84. These park and ride lots can be utilized for shuttle bus service to and from the University of Connecticut.

4) State and regional officials are encouraged to provide lockers to store bicycles at commuter lots which serve as transit stops.

5) Municipal, State and regional officials should encourage and work with private companies providing bus, taxi and limousine service in Mansfield. Efforts to promote out-of-town bus and limousine services to and from the UConn campus should be supported.

6) Regulatory standards should include requirements for off-road bus stops and bus shelters for commercial, industrial, multi-family and governmental land uses.

7) If passenger train service continues to utilize the Central Vermont Railroad tracks, consideration should be given to creating a train stop and associated parking in Mansfield Depot or Eagleville.

8) State officials should preserve the rail corridor between Manchester and Willimantic for future passenger and freight transportation use.

9) Local, regional and State officials should help publicize the Rideshare Company and the Commuters Register, a free matching and information service for commuters. All employers are encouraged to offer ride-sharing programs.

E. Pedestrian and Bicycle Transportation

Safe provision for pedestrians and bicycle traffic is an increasingly important element in Mansfield's transportation strategy. Many individuals are walking and running for physical fitness and bicycles are being used increasingly for recreation as well as for basic transportation to work, school or shopping destinations. This Plan of Development recommends that a concerted effort should be made to promote pedestrian and bicycle usage, particularly in areas adjacent to schools and public facilities, commercial districts, major employment centers and bus stops.

To promote pedestrian and bicycle use, it is essential that these modes of transportation be considered by the State of Connecticut, Windham Regional Transit District and Town of Mansfield when designing and implementing public transit and road improvement programs. For public transit projects, safe accessways for pedestrians and bicycle users, as well as secure bicycle lockers, should be considered at all park and ride and bus stop locations. All road improvement projects should consider sightline and roadside safety improvements that will enhance pedestrian and bicycle usage. Speed humps or differential pavement strips and additional signage should be considered along bicycle routes to help slow motor vehicle speeds. In some cases, particularly along arterial roadways and in densely developed areas, separate pathways for pedestrian and bicycle use should be considered. As an example, provisions for bicycle and pedestrian access between the Four Corners commercial area and the UConn campus should be included as part of the Connecticut Technology Park roadway system. In addition, site plan and special permit approval criteria should reinforce the importance of safe pedestrian and bicycle access and all multi-family, commercial and industrial development projects should include handicap accessible pedestrian walkways and bicycle racks and secure lockers. Site lighting also should take into account pedestrian accessways.

Efforts to promote pedestrian and bicycle use should be concentrated in areas within and adjacent to the University of Connecticut, in areas adjacent to local schools, parks and municipal buildings, local bus stop locations and in Plan of Development designated commercial, industrial and medium to high-density areas. Bicycle routes also should consider State and regional planning efforts including bicycle routes designated in the Northeast Connecticut Visitor's District. The existing Four Corners commercial area and the southern portion of town south of Puddin Lane, which includes multi-family housing developments and Townwide commercial uses, are examples of areas where more effort to provide safe pedestrian and bicycle access is needed. Additional bicycle racks should be provided on the UConn campus and within existing commercial areas. Secure bicycle lockers should be considered for on-campus UConn students and individuals wishing to commute on bicycle to the UConn campus. Secure bicycle lockers should be provided at multi-family housing projects.

Through the efforts of the Mansfield Conservation Commission and a Town Bike Path Planning Committee, suggested bicycle routes were delineated in Mansfield in the 1970's and incorporated into the 1982 Plan of Development. The previously approved Mansfield bicycle route plan has been reanalyzed by Mansfield's Transportation Advisory Committee, which has prepared a December, 1992 map entitled "Proposed Transportation Network Bike Route Plan." This plan is transportation-oriented and has been designed to link important parts of the Town

and its transit systems. Recreational bike routes, such as the Eastern Connecticut Visitors District loop are not depicted on this plan. In addition to depicting recommended bicycle routes, this plan identifies a number of areas where safety improvements such as cleared landings and shoulder widenings, signal modifications and paved bicycle path extensions should be considered. Although this bicycle route plan is currently conceptual in nature, as it has not yet been refined through a public participation process and through more specific design work, it has been incorporated into this Plan of Development as an appendix. This bicycle route plan is considered a good starting point for future bicycling planning in Mansfield. This Plan of Development recognizes that this bicycle route plan will be revised over time, based on public input and more specific design work. It is expected that a revised plan will be approved by the Town Council in 1993. Upon approval of a revised Mansfield bike route plan, additional signage and pavement markings should be installed along designated routes and identified safety improvements should be implemented as soon as possible. Based on currently available information, high-priority areas for bicycle route improvements include Town and State roads in the UConn and East Brook Mall areas and along the existing designated bicycle route connecting the UConn and Mall areas. In addition, high priority should be placed on the construction of separate bikeway/walkways along the Connecticut Technology Park roadways, along Route 195 in the East Brook Mall area and along other roads in the UConn area where a separate bikeway/walkway would be desirable. To enhance recreational bicycle usage in Mansfield and surrounding communities, improvements along Mansfield roads designated within the Northeastern Connecticut Visitors District "Hale's" and "Hollow" bicycle routes also should be considered.

F. Road Safety Improvement Recommendations

1. General

This Plan recognizes that an ongoing road maintenance and safety improvement program is a necessary component of a comprehensive traffic safety program. It also is noted that road improvements can alter traffic patterns and affect vehicular speeds and that inappropriate road improvements can detrimentally affect the character of a community. This Plan of Development supports the retention of rural, historic and scenic character along roads within our town. To achieve these local objectives and provide for safe, efficient and environmentally sound transportation systems, it is essential that State, regional and local officials work together to develop and implement a comprehensive intermodal transportation plan. Such a plan should encourage public transportation services (bus, train, etc.), ride-sharing programs and pedestrian/bicycle services that reduce vehicular traffic and provide only for those road improvement projects that are necessary to address public safety problems. In considering road safety improvements, public input should be obtained at early stages of the planning process, and there should be additional opportunities for citizen input before road improvements are designed and at subsequent stages of design and approval. A pre-design analysis should include careful consideration of the nature of the existing problem and the need for road improvements, existing road and roadside characteristics, potential environmental impacts, alternative design options, traffic counts, level of service factors, accident history, speed limits and public transportation programs that may reduce vehicular traffic. Through comprehensive planning efforts and public participation, necessary road improvements can be implemented that will minimize impacts on the environment, roadside character and neighboring properties without compromising public safety. In keeping with stated transportation goals and recommendations, this Plan discourages road improvements designed solely to accommodate or facilitate greater volumes of traffic or higher traffic counts.

As previously noted, this Plan of Development endorses the utilization of the Mansfield Transportation Advisory Committee's methodology for analyzing potential road improvement projects in Mansfield. This methodology is fully documented in a 2/9/93 report entitled "The Prioritization of Proposed Road Improvements in the Town of Mansfield, Connecticut." This evaluation process, as may be refined in the future, emphasizes consideration of non-structural measures before the use of more costly structural road improvements. The Transportation Advisory Committee's developed review process consists of the following general elements:

A. Traffic, accident and condition data should be gathered and carefully examined. The cause of the problem should be defined as clearly as possible so that the solutions considered are truly appropriate to the problem.

B. Simple, non-structural solutions to road problem areas should be evaluated and applied (where applicable) prior to the consideration of expensive structural solutions or designs. Non-structural solutions include (not in order of priority):

- Sign improvements and warning devices
- Pavement markings
- Removal of vegetation or other obstruction

- New signal timing or coordination
- Restrict or eliminate the problem movement
- Speed reduction and enforcement
- Reduce traffic by utilizing other modes (transit, bicycle)
- Signalization

C. Many factors should be considered in determining the relative priority of a particular road problem. The following reasons and criteria for relative importance should be considered (not listed in order of importance):

Reason or Driving Force	Criteria for Relative Importance
- Structural or maintenance problem	- Condition of the road; potential for closure
- Area development	- Degree of development, planned & future
- Non-injury accidents	- Frequency; total in 3-year period
- Injury or fatal accidents	- Frequency; total in 3-year period
- Requested by area resident(s)	- Degree/qty of expressed neighborhood concern
- Poor sight distance	- Sight distance relative to accepted standards
- Awkward intersection or traffic movement	- Alignment, complexity & distractions at at location
- Pedestrians and bicycles	- Ped/bike traffic; compatibility with Town's bike plans
- Level of service	- Actual LOS; "D" and below
- Diversion of traffic	- Degree of beneficial traffic diversion
- Funding	- % of grant funds available for the project

D. After any improvements are made, traffic and condition data should be gathered, carefully examined and compared to the data before the improvements were done. In this manner the effect of the improvements, be it positive or negative, can be determined.

This Plan recommends a continuation of Mansfield's pavement management and road maintenance and improvement program with multi-year planning horizons to address comprehensively maintenance and improvement needs. This program, which is administered by the Town's Public Works and Engineering Department, must be periodically updated to consider existing traffic volumes and safety problems, pedestrian and bicycle use requirements, the land use and transportation recommendations of Mansfield's Plan of Development and the current transportation policies of the Town Council and Planning and Zoning Commission. Many maintenance and potential improvement projects involve State-owned and maintained arterial streets. It is emphasized that coordination between local and State officials is essential at all pre-design, design and construction stages of problem identification, project or program development and implementation. In general, arterial and collector streets serving the University of Connecticut campus area, other areas designated as higher-density residential, Townwide commercial and industrial, and designated bicycle routes should be given appropriately higher priority for maintenance and, as appropriate after careful analysis of all options, improvement.

This Plan of Development includes a listing of potential road safety improvement projects. This listing is based on the land use recommendations of this Plan, and the specific recommendations of the Transportation Advisory Committee. The listing takes into account currently available information, including a 1988 consultant study of intersections in town and data and information provided by the Mansfield Traffic Authority and Mansfield's Public Works, Engineering and Planning staff. This listing, which is subject to future modification based on additional study and analysis and the Transportation Advisory Committee's methodology, does not include numerous drainage and maintenance projects that must be handled on an ongoing basis by the Mansfield Public Works Department and State of Connecticut. The listing of potential roadway safety improvements will facilitate the Town's annual review of the State's Transportation Improvements Plan and the Windham Regional Planning Agency's transportation and public transit plans. The listing also will assist in reviewing capital budget requests for road and transit improvements.

2. Potential Improvements on Arterial Streets

The following listing identifies potential areas where improvements should be considered on arterial streets. As previously recommended, all potential improvements should be based on a comprehensive analysis of all options that includes pre-design coordination between local, regional and State officials and opportunities for public input. All potential improvements to State roads should take into account potential impacts on historic, natural resource and aesthetic features. Prior to character-changing widening and realignment work, potential improvements including signage, sightline and shoulder work, pavement markings, pedestrian and bicycle lanes, signalization, drainage, differential pavement strips and speed humps, as well as speed reduction and enforcement, should be considered.

- Completion of Connecticut Technology Park road from Route 44 to N. Eagleville Road

- Safety improvements along Route 275, particularly near the Maple Road intersection

- Safety improvements along Route 195, particularly near the Bassetts Bridge Road, Chaffeeville Road and Puddin Lane intersections

- Safety improvements along Route 89, particularly near the Mount Hope Road intersection

- Safety improvements along Route 32, particularly near the intersections with Route 31. Improvements on Route 32 should be considered once a decision is made regarding major transportation improvements along the Route 6 corridor.

- Safety improvements along Route 44, particularly near the intersections with Route 32, Birch/Cedar Swamp Roads, and Baxter/Hunting Lodge Roads. It is noted that improvements at these locations should be considered after the development of the Connecticut Technology Park Road and after construction begins on the Master Plan for reuse of the former Mansfield Training School land near the junction of Routes 32 and 44.

3. Potential Improvements on Collector and Local Streets

The following listing identifies potential areas where improvements should be considered on collector and local streets. All potential improvements should be based on a comprehensive analysis that includes opportunities for public input. All potential improvements to local roads and bridges should take into account potential impacts on historic, natural resource and aesthetic factors. Prior to character-changing widening and realignment work, potential improvements including signage, sightline and shoulder work, pavement markings, pedestrian and bicycle lanes, drainage, differential pavement strips and speed humps, as well as speed reduction and enforcement, should be considered.

- Safety improvements along Maple Road
- Safety improvements along Mansfield City Road, particularly from Spring Hill Rd. to Pleasant Valley Road
- Safety improvements along Mansfield Avenue
- Reconstruction of Cider Mill Road Bridge
- Reconstruction of the Mount Hope River Bridge
- Reconstruction of Stone Mill Bridge
- Safety improvements along Bassetts Bridge Road, particularly near the intersection with Bedlam Road (non-structural measures appear appropriate)
- Safety improvements along Conantville Road, particularly near the intersection at Meadowbrook Lane (non-structural measures appear appropriate)
- Safety improvements, Dog Lane - Route 195 to Willowbrook Road

G. Private Roadways

To provide suitable access to residential as well as commercial and industrial development, all new accessways, including those that will be privately owned and maintained, should be built in accordance with pre-established standards for width, base, surface, drainage and vertical and horizontal alignments. Private ownership of roadways to commercial, industrial and multi-family development is recommended due to the nature and use intensity of these roadways. To minimize future circulation problems on private roadways, particularly residential accessways, suitable arrangements for longterm maintenance should be clarified prior to approval by the Planning and Zoning Commission and construction. Development projects with private roads should specify on submitted plans that the Town of Mansfield shall not be obligated to assume any future responsibilities, including repair or maintenance work, regarding the private roads. Where private "community associations" will be responsible for road and drainage systems, acceptable provisions for association governance and maintenance must be filed on the Land Records prior to construction. The existing policy of prohibiting new subdivision lots on private roads should be continued, except in conjunction with commercial or industrial developments or residential cluster developments that comply with pre-established standards.

XII, Consistency with the State Plan of Conservation and Development

Pursuant to the provisions of Section 8-23 of the Connecticut General Statutes, as modified by Public Act 91-395, this Plan of Development has been reviewed with respect to the State Plan of Conservation and Development.

In general, Mansfield's Plan of Development is considered to be consistent with all land use goals and policy recommendations and Locational Guide Map designations of the State's Conservation and Development Plan as revised in 1992. The State Plan does not utilize the same land use classifications as Mansfield's Plan of Development and the State's Locational Guide Plan is at a scale that prevents precise comparisons with Mansfield's detailed mapping. Nevertheless, it has been determined that the two Plans are consistent with respect to the location of existing and proposed higher density land uses and with respect to Conservation and Preservation areas. Based on a more specific analysis, the following minor mapping inconsistencies have been noted:

- Areas west of Separatist Road and south of North Eagleville Road are depicted as Urban Conservation in the State Plan, due to the nature of existing development and the State's definitions. A designation as Rural Land would be more consistent with Mansfield's Plan of Development.

- Mansfield's Plan of Development depicts small commercial areas along Route 195 in Mansfield Center and at the junction of Routes 195 and 32. Mansfield's classification recognizes existing commercial uses and provides for the possibility of additional low intensity commercial uses. These commercial areas are depicted as Conservation and Rural Land in the State Plan. The State Plan does not have a classification to recognize neighborhood-oriented commercial areas.

- The State Plan depicts Urban Growth areas in southwestern Mansfield east of Route 32 and north of Pleasant Valley Road and in northwestern Mansfield north of Route 44 in the Nelson and Cedar Swamp Brook areas. A Rural Land classification for these areas would be more consistent with Mansfield's Plan of Development.

Section 8-23 of the State Statutes also requires municipalities with more than 20% of their land within State designated Preservation, Conservation or Rural Land categories to consider the use of cluster development to the extent consistent with soil types, terrain and infrastructure capacity within the municipality. Mansfield has more than 20% of its land in these classifications. The use of cluster development is specifically addressed in Chapters V (Natural Resources), Chapter VI (Residential Land Use) and Chapter X (Open Space) of this Plan of Development.

INFORMATION SOURCES

Numerous information sources were utilized in completing this Plan of Development Update. Among the books and reports that were particularly useful were the following:

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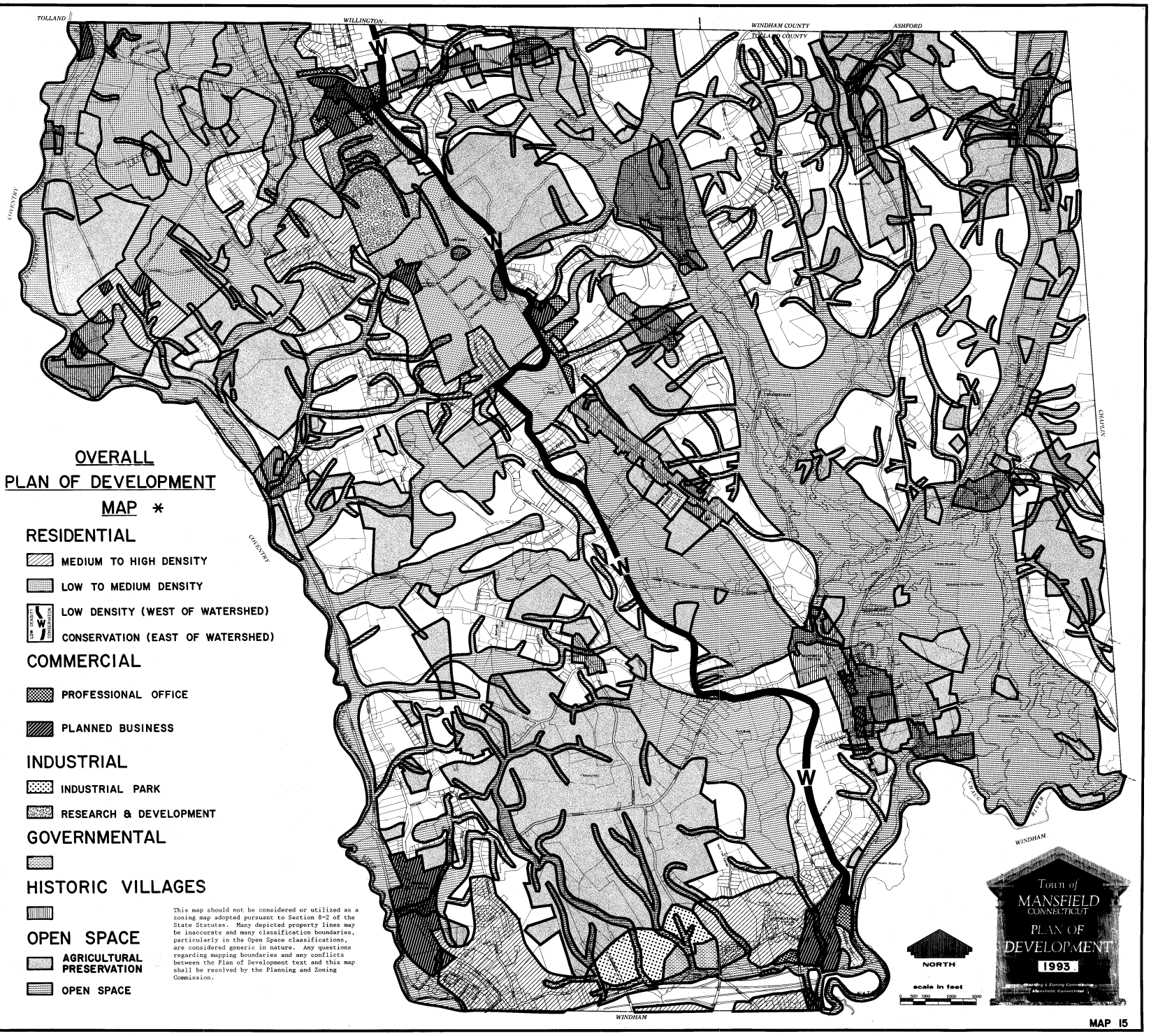
In addition, there are numerous staff reports and review materials that are contained or made reference to in a Planning Office file entitled "Plan of Development Update".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PLAN OF DEVELOPMENT
MAP *
RESIDENTIAL
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LOW TO MEDIUM DENSITY
LOW DENSITY (WEST OF WATERSHED)
CONSERVATION (EAST OF WATERSHED)
COMMERCIAL
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PLANNED BUSINESS
INDUSTRIAL
INDUSTRIAL PARK
RESEARCH & DEVELOPMENT
GOVERNMENTAL
HISTORIC VILLAGES
OPEN SPACE
AGRICULTURAL PRESERVATION
OPEN SPACE
This map should not be considered or utilized as a zoning map adopted pursuant to Section 8-2 of the State Statutes. Many depicted property lines may be inaccurate and many classification boundaries, particularly in the Open Space classifications, are considered generic in nature. Any questions regarding mapping boundaries and any conflicts between the Plan of Development text and this map shall be resolved by the Planning and Zoning Commission.
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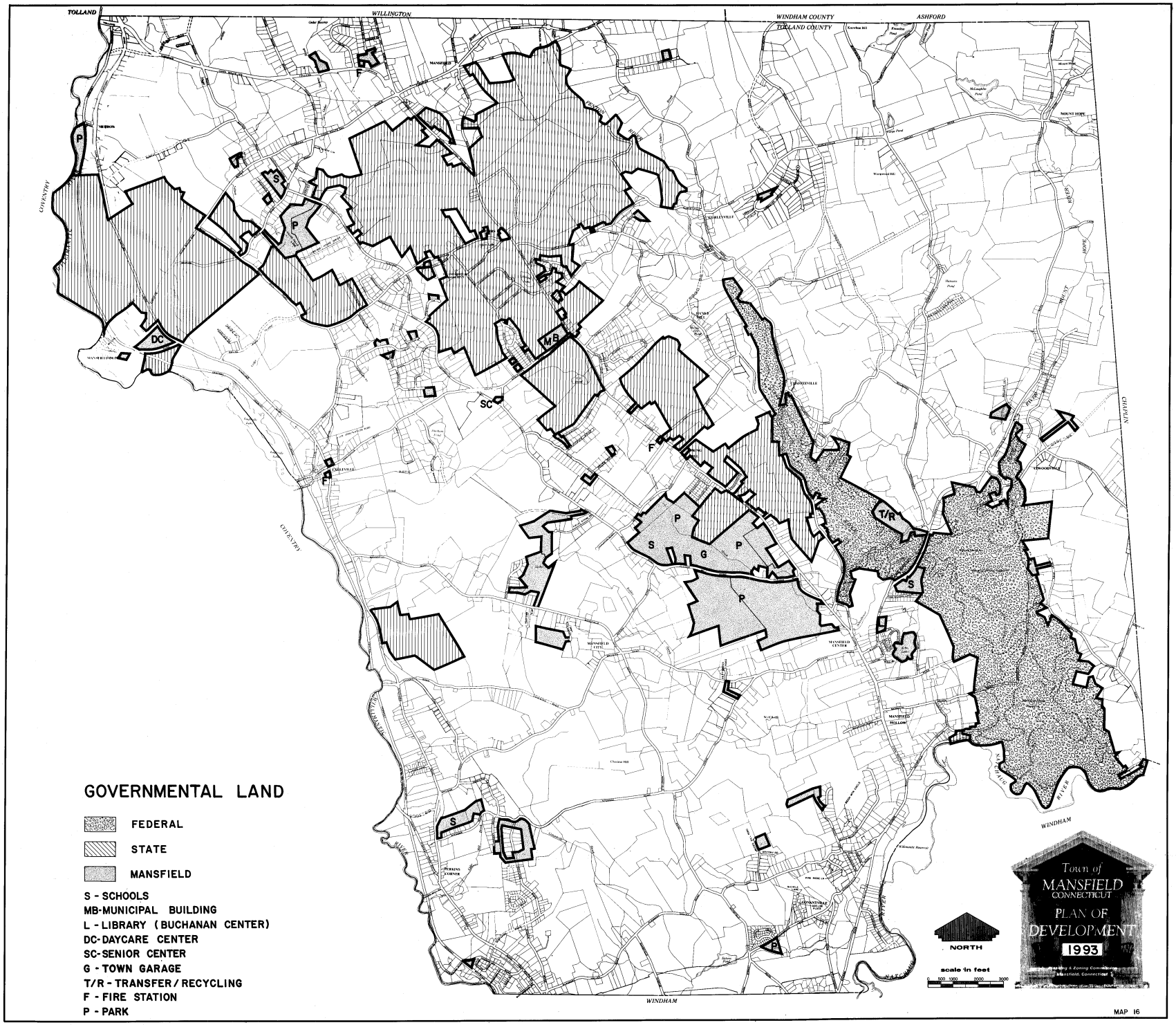
Town of
MANSFIELD
CONNECTICUT
PLAN OF
DEVELOPMENT
1993

MAP 15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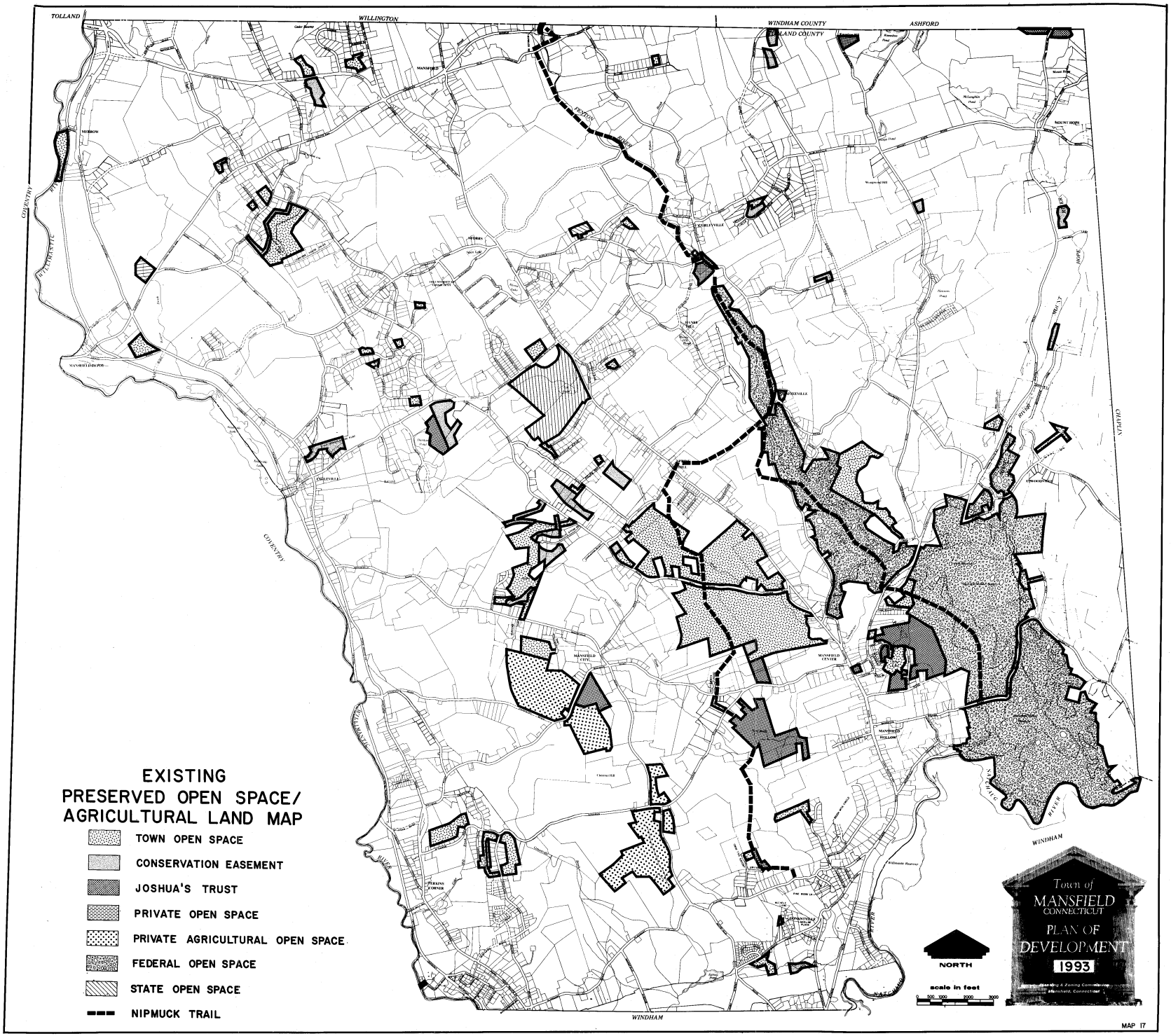
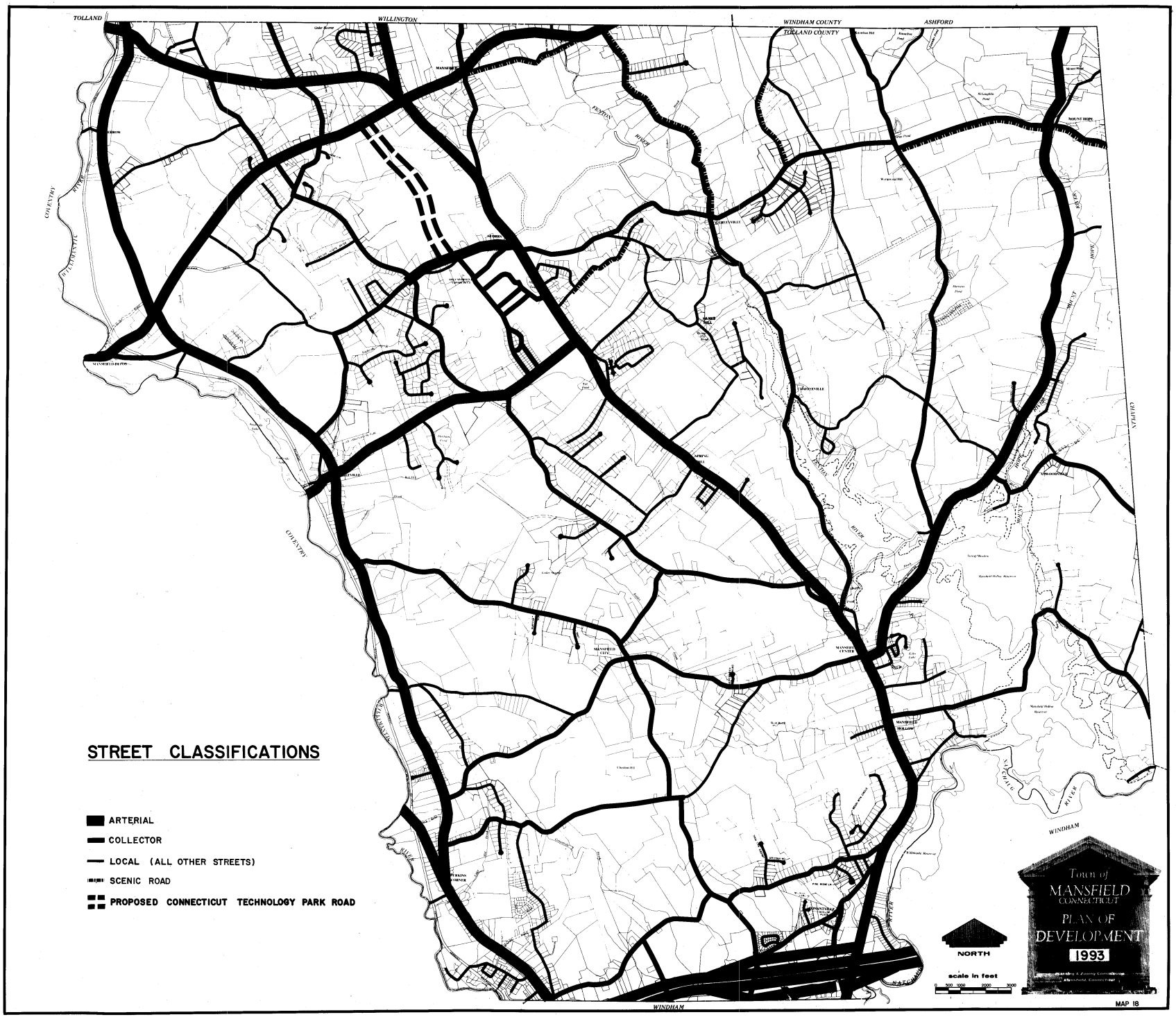
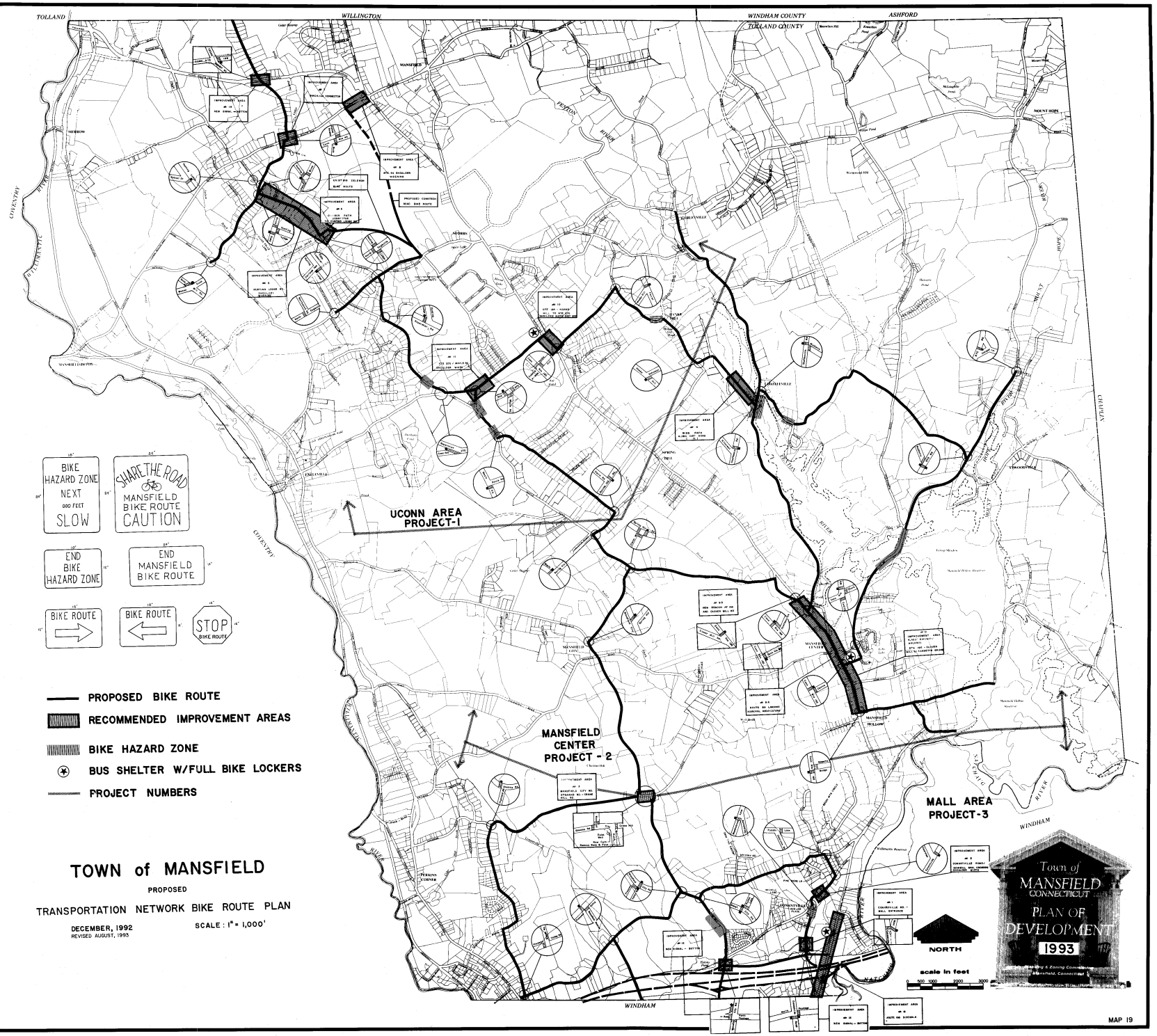
GOVERNMENTAL LAND
FEDERAL
STATE
MANSFIELD
S - SCHOOLS
MB-MUNICIPAL BUILDING
L - LIBRARY (BUCHANAN CENTER)
DC-DAYCARE CENTER
SC-SENIOR CENTER
G - TOWN GARAGE
T/R - TRANSFER / RECYCLING
F - FIRE STATION
P - PARK
NORTH
scale in feet
0 500 1000 2000 3000
Town of
MANSFIELD
CONNECTICUT
PLAN OF
DEVELOPMENT
1993
Planning & Zoning Commission
Mansfield, Connecticut

MAP 16


TOLLAND
WILLINGTON
WINDHAM COUNTY
ASHFORD
COVENTRY
WINDHAM
EXISTING
PRESERVED OPEN SPACE/
AGRICULTURAL LAND MAP
TOWN OPEN SPACE
CONSERVATION EASEMENT
JOSHUA'S TRUST
PRIVATE OPEN SPACE
PRIVATE AGRICULTURAL OPEN SPACE
FEDERAL OPEN SPACE
STATE OPEN SPACE
NIPMUCK TRAIL
NORTH
scale in feet
0 500 1000 2000 3000
Town of
MANSFIELD
CONNECTICUT
PLAN OF
DEVELOPMENT
1993

MAP 17


TOLLAND
WILLINGTON
WINDHAM COUNTY
TOLLAND COUNTY
ASHFORD
COVENTRY
WINDHAM
STREET CLASSIFICATIONS
ARTERIAL
COLLECTOR
LOCAL (ALL OTHER STREETS)
SCENIC ROAD
PROPOSED CONNECTICUT TECHNOLOGY PARK ROAD
NORTH
scale in feet
0 500 1000 2000 3000
Town of
MANSFIELD
CONNECTICUT
PLAN OF
DEVELOPMENT
1993
MAP 18



TOWN of MANSFIELD

PROPOSED

TRANSPORTATION NETWORK BIKE ROUTE PLAN

DECEMBER, 1992
REVISED AUGUST, 1993

SCALE : 1" = 1,000'

MAP 19